MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT IDENTIFICATION

Trade Name: Accell Clean™

Code: 5ABC40-1

Company: Advanced BioCatalytics Corporation
18010 Skypark Circle, Suite 130
Irvine, CA 92614

Emergency Telephone Numbers:
Day: (949) 442-0880
International: +1-(949) 442-0880

Basic Hazard Information

NFPA/HMIS		Hazard Rating
Health:	1	0 - Insignificant
Flammability:	0	1 - Slight
Reactivity:	0	2 - Moderate
		3 - High
		4 - Extreme

NFPA=National Fire Protection Association

HMIS=Hazardous Materials Identification System

SECTION 2: HAZARDOUS INGREDIENTS AS DEFINED IN 29 CFR 1910.1200

Name	CAS Number	Percent	TLV (threshold limit value)	Hazard
None.	Not applicable.	Not applicable.	Not applicable.	Not applicable.

SECTION 3: PHYSICAL PROPERTIES

Boiling Point:	>100°C (212°F)	**Appearance:**	Clear, dark amber liquid.
Freezing Point:	<0°C (32°F)	**Odor:**	Non-obnoxious – weak, neutral odor.
Percent volatile (volume):	84-86%	**Specific gravity:**	1.030 - 1.050
Vapor pressure:	Same as water.	**Solubility in water:**	Complete.
Vapor density:	Not applicable.	**Evaporation rate:**	Same as water.

SECTION 4: FIRE AND EXPLOSION HAZARD DATA

Flash Point:	>93°C (200 °F)
Extinguishing media:	Water, CO_2, chemical foam.
Special fire fighting procedures:	None.
Unusual fire and explosion hazards:	None.
Flammable limits (by volume):	Not applicable.

SECTION 5: HEALTH HAZARD DATA

Type of Exposure	Reaction	Emergency and First Aid Procedures
Skin Contact	May cause moderate irritation.	Rinse off with water. If irritation persists, contact physician.
Eye Contact	May cause mild irritation.	Rinse with water. If irritation persists, contact physician.
Vapor Inhalation	Not applicable.	
Ingestion	May cause gastrointestinal irritation with nausea and diarrhea.	If symptoms persist, contact physician.

SECTION 6: TOXICOLOGICAL INFORMATION

Oral LD_{50}: Estimated to be > 5g/kg. (rat)	Contains only ingredients that are recognized as safe in food grade applications in accordance with U.S. Food and Drug Administration (FDA) 21CFR 178.3400, and/or found on the GRAS list, Parts 182 and 184.

SECTION 7: REACTIVITY DATA	
Stability:	Stable.
Hazardous polymerization:	Will not occur.
Conditions to avoid:	Storage in elevated temperatures or direct sunlight for prolonged periods. Do NOT freeze.
Materials to avoid:	Strong acid, bases, oxidative agents and quaternary disinfectants can degrade/inactivate product.
Hazardous decomposition products:	Carbon Monoxide. Carbon Dioxide. Oxides of Sulfur (includes sulfur di and tri oxides).
pH:	7.5 – 8.5

SECTION 8: SPILL OR LEAK PROCEDURES	
Steps to be taken if material is released or spilled:	Wash down with water.
Waste disposal method:	Flush into sewer system.

SECTION 9: SPECIAL PROTECTIVE EQUIPMENT			
OBSERVE GOOD HOUSEKEEPING / HYGIENE PRACTICES			
Skin:	Rubber gloves recommended.	Ventilation:	Not applicable.
Eyes:	Safety goggles recommended.	Other equipment:	Not applicable.
Nose/mouth:	Not applicable.		

SECTION 10: SPECIAL PRECAUTIONS	
Precautions to be taken in handling and storage:	Store in cool place in closed container. For best performance, use within 36 months.

SECTION 11: TRANSPORT INFORMATION	
Department of transportation (DOT) shipping label:	Not regulated.

600114-00 MOBIL DTE 797 OIL

MATERIAL SAFETY DATA BULLETIN

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MOBIL DTE 797 OIL

SUPPLIER:
EXXONMOBIL OIL CORPORATION
3225 GALLOWS RD.
FAIRFAX, VA 22037

24 - HOUR HEALTH AND SAFETY EMERGENCY (CALL COLLECT): 609-737-4411

24 - HOUR TRANSPORTATION EMERGENCY:
(PRIMARY) CHEMTREC: 800-424-9300
(SECONDARY): 281-834-3296

PRODUCT AND TECHNICAL INFORMATION:
800-662-4525
703-846-6693

MSDS FAX ON DEMAND: 613-228-1467

OTHER MSDS INFORMATION: 856-224-4644

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAMES AND SYNONYMS: PET. HYDROCARBONS AND ADDITIVES

GLOBALLY REPORTABLE MSDS INGREDIENTS: NONE.

SEE SECTION 8 FOR EXPOSURE LIMITS (IF APPLICABLE).

3. HAZARDS IDENTIFICATION

UNDER NORMAL CONDITIONS OF USE, THIS PRODUCT IS NOT CONSIDERED HAZARDOUS ACCORDING TO REGULATORY GUIDELINES (SEE SECTION 15).

EMERGENCY OVERVIEW: STRAW LIQUID.

DOT ERG NO.: NA

POTENTIAL HEALTH EFFECTS:
UNDER NORMAL CONDITIONS OF INTENDED USE, THIS PRODUCT DOES NOT POSE A RISK TO HEALTH. EXCESSIVE EXPOSURE MAY RESULT IN EYE, SKIN OR RESPIRATORY IRRITATION.

FOR FURTHER HEALTH EFFECTS/TOXICOLOGICAL DATA, SEE SECTION 11.

4. FIRST AID MEASURES

EYE CONTACT:
FLUSH THOROUGHLY WITH WATER. IF IRRITATION OCCURS, CALL A PHYSICIAN.

SKIN CONTACT:
WASH CONTACT AREAS WITH SOAP AND WATER. REMOVE AND CLEAN OIL SOAKED CLOTHING DAILY AND WASH AFFECTED AREA. (SEE SECTION 16 - INJECTION INJURY)

INHALATION:
NOT EXPECTED TO BE A PROBLEM. HOWEVER, IF RESPIRATORY IRRITATION, DIZZINESS, NAUSEA, OR UNCONSCIOUSNESS OCCURS DUE TO EXCESSIVE VAPOR OR MIST EXPOSURE, SEEK IMMEDIATE MEDICAL ASSISTANCE. IF BREATHING HAS STOPPED, ASSIST VENTILATION WITH A MECHANICAL DEVICE OR MOUTH-TO-MOUTH RESUSCITATION.

INGESTION:
NOT EXPECTED TO BE A PROBLEM. SEEK MEDICAL ATTENTION IF DISCOMFORT OCCURS. DO NOT INDUCE VOMITING.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.

SPECIAL FIRE FIGHTING PROCEDURES:
WATER OR FOAM MAY CAUSE FROTHING. USE WATER TO KEEP FIRE EXPOSED CONTAINERS COOL. WATER SPRAY MAY BE USED TO FLUSH SPILLS AWAY FROM EXPOSURE. PREVENT RUNOFF FROM FIRE CONTROL OR DILUTION FROM ENTERING STREAMS, SEWERS, OR DRINKING WATER SUPPLY.

SPECIAL PROTECTIVE EQUIPMENT:
FOR FIRES IN ENCLOSED AREAS, FIRE FIGHTERS MUST USE SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE.

COMBUSTION PRODUCTS:
FUMES, SMOKE, CARBON MONOXIDE, SULFUR OXIDES, ALDEHYDES AND OTHER DECOMPOSITION PRODUCTS, IN THE CASE OF INCOMPLETE COMBUSTION.

FLASH POINT C(F): >207 (405) (ASTM D-93).

FLAMMABLE LIMITS (APPROX. % VOL. IN AIR):
LEL: 0.9%
UEL: 7.0%

NFPA HAZARD ID:
HEALTH 0
FLAMMABILITY 1
REACTIVITY 0

6. ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES:
REPORT SPILLS/RELEASES AS REQUIRED TO APPROPRIATE AUTHORITIES. U.S. COAST GUARD AND EPA REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS/RELEASES THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT SPILL/RELEASE TO COAST GUARD NATIONAL RESPONSE CENTER TOLL FREE NUMBER (800) 424-8802. IN CASE OF ACCIDENT OR ROAD SPILL NOTIFY CHEMTREC (800) 424-9300.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

LAND SPILL:
SHUT OFF SOURCE TAKING NORMAL SAFETY PRECAUTIONS. TAKE MEASURES TO MINIMIZE THE EFFECTS ON GROUND WATER. RECOVER BY PUMPING OR CONTAIN SPILLED MATERIAL WITH SAND OR OTHER SUITABLE ABSORBENT AND REMOVE MECHANICALLY INTO CONTAINERS. IF NECESSARY, DISPOSE OF ADSORBED RESIDUES AS DIRECTED IN SECTION 13.

WATER SPILL:
CONFINE THE SPILL IMMEDIATELY WITH BOOMS. WARN OTHER SHIPS IN THE VICINITY. NOTIFY PORT AND OTHER RELEVANT AUTHORITIES. REMOVE FROM THE SURFACE BY SKIMMING OR WITH SUITABLE ABSORBENTS. IF PERMITTED BY REGULATORY AUTHORITIES THE USE OF SUITABLE DISPERSANTS SHOULD BE CONSIDERED WHERE RECOMMENDED IN LOCAL OIL SPILL PROCEDURES.

ENVIRONMENTAL PRECAUTIONS:
PREVENT MATERIAL FROM ENTERING SEWERS, WATER SOURCES OR LOW LYING AREAS; ADVISE THE RELEVANT AUTHORITIES IF IT HAS, OR IF IT CONTAMINATES SOIL/VEGETATION.

PERSONAL PRECAUTIONS: SEE SECTION 8.

7. HANDLING AND STORAGE

HANDLING:
NO SPECIAL PRECAUTIONS ARE NECESSARY BEYOND NORMAL GOOD HYGIENE PRACTICES. SEE SECTION 8 FOR ADDITIONAL PERSONAL PROTECTION ADVICE WHEN HANDLING THIS PRODUCT.

STORAGE:
KEEP CONTAINERS CLOSED WHEN NOT IN USE. DO NOT STORE IN OPEN OR UNLABELLED CONTAINERS. STORE AWAY FROM STRONG OXIDIZING AGENTS AND COMBUSTIBLE MATERIALS. DO NOT STORE NEAR HEAT, SPARKS, FLAME OR STRONG OXIDANTS.

SPECIAL PRECAUTIONS: PREVENT SMALL SPILLS AND LEAKAGES TO AVOID SLIP HAZARD.

EMPTY CONTAINER WARNING:
EMPTY CONTAINERS RETAIN RESIDUE (LIQUID AND/OR VAPOR) AND CAN BE DANGEROUS. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. DO NOT ATTEMPT TO

REFILL OR CLEAN CONTAINER SINCE RESIDUE IS DIFFICULT TO REMOVE. EMPTY DRUMS SHOULD BE COMPLETELY DRAINED, PROPERLY BUNGED AND PROMPTLY RETURNED TO A DRUM RECONDITIONER. ALL CONTAINERS SHOULD BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER AND IN ACCORDANCE WITH GOVERNMENTAL REGULATIONS.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS:
WHEN MISTS/AEROSOLS CAN OCCUR, THE FOLLOWING ARE RECOMMENDED:
5 MG/M3 (AS OIL MIST) - ACGIH THRESHOLD LIMIT VALUE (TLV)
10 MG/M3 (AS OIL MIST) - ACGIH SHORT TERM EXPOSURE LIMIT (STEL)
5 MG/M3 (AS OIL MIST) - OSHA PERMISSIBLE EXPOSURE LIMIT (PEL)

VENTILATION:
IF MISTS ARE GENERATED, USE ADEQUATE VENTILATION, LOCAL EXHAUST OR ENCLOSURES TO CONTROL BELOW EXPOSURE LIMITS.

RESPIRATORY PROTECTION:
IF MISTS ARE GENERATED, AND/OR WHEN VENTILATION IS NOT ADEQUATE, WEAR APPROVED RESPIRATOR.

EYE PROTECTION:
IF EYE CONTACT IS LIKELY, SAFETY GLASSES WITH SIDE SHIELDS OR CHEMICAL TYPE GOGGLES SHOULD BE WORN.

SKIN PROTECTION:
NOT NORMALLY REQUIRED. WHEN SPLASHING OR LIQUID CONTACT CAN OCCUR FREQUENTLY, WEAR OIL RESISTANT GLOVES AND/OR OTHER PROTECTIVE CLOTHING. GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

9. PHYSICAL AND CHEMICAL PROPERTIES

TYPICAL PHYSICAL PROPERTIES ARE GIVEN BELOW. CONSULT PRODUCT DATA SHEET FOR SPECIFIC DETAILS.

APPEARANCE: LIQUID

COLOR: STRAW

ODOR: MILD

ODOR THRESHOLD-PPM: NE

pH: NA

BOILING POINT C(F): >316 (600)

MELTING POINT C(F): NA

FLASH POINT C(F): >207 (405) (ASTM D-93)

FLAMMABILITY (SOLIDS): NE

AUTO FLAMMABILITY: NA

EXPLOSIVE PROPERTIES: NA

OXIDIZING PROPERTIES: NA

VAPOR PRESSURE-MMHg 20 C: <0.1

VAPOR DENSITY: >2.0

EVAPORATION RATE: NE

RELATIVE DENSITY, 15/4 C: 0.86

SOLUBILITY IN WATER: NEGLIGIBLE

PARTITION COEFFICIENT: >3.5

VISCOSITY AT 40 C, CST: 30.4
VISCOSITY AT 100 C, CST: 5.4

POUR POINT C(F): -7 (20)

FREEZING POINT C(F): NE

V\ .TILE ORGANIC COMPOUND: NE

DMSO EXTRACT, IP-346 (WT.%): <3, FOR MINERAL OIL ONLY

NA=NOT APPLICABLE
NE=NOT ESTABLISHED
D=DECOMPOSES

FOR FURTHER TECHNICAL INFORMATION, CONTACT YOUR MARKETING REPRESENTATIVE

10. STABILITY AND REACTIVITY

STABILITY (THERMAL, LIGHT, ETC.): STABLE.

CONDITIONS TO AVOID: EXTREME HEAT AND HIGH ENERGY SOURCES OF IGNITION.

INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS:
PRODUCT DOES NOT DECOMPOSE AT AMBIENT TEMPERATURES.

H/ \RDOUS POLYMERIZATION: WILL NOT OCCUR.

11. TOXICOLOGICAL DATA

ACUTE TOXICOLOGY:

OI , TOXICITY (RATS):
PRACTICALLY NON-TOXIC (LD50: GREATER THAN 2000 MG/KG).
BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

DERMAL TOXICITY (RABBITS):
PRACTICALLY NON-TOXIC (LD50: GREATER THAN 2000 MG/KG).
BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

INHALATION TOXICITY (RATS):
PRACTICALLY NON-TOXIC (LC50: GREATER THAN 5 MG/L).
BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

EYE IRRITATION (RABBITS):
PRACTICALLY NON-IRRITATING. (DRAIZE SCORE: GREATER THAN 6 BUT 15 OR LESS).
BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

SKIN IRRITATION (RABBITS):
PRACTICALLY NON-IRRITATING. (PRIMARY IRRITATION INDEX: GREATER THAN 0.5 BUT LESS THAN 3).
BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

OTHER ACUTE TOXICITY DATA:
ALTHOUGH AN ACUTE INHALATION STUDY WAS NOT PERFORMED WITH THIS PRODUCT, A VARIETY OF MINERAL AND SYNTHETIC OILS, SUCH AS THOSE IN THIS PRODUCT, HAVE BE TESTED. THESE SAMPLES HAD VIRTUALLY NO EFFECT OTHER THAN A NONSPECIFIC INFLAMMATORY RESPONSE IN THE LUNG TO THE AEROSOLIZED MINERAL OIL. THE PRESENCE OF ADDITIVES IN OTHER TESTED FORMULATIONS (IN APPROXIMATELY THE SAME AMOUNTS AS IN THE PRESENT FORMULATION) DID NOT ALTER THE OBSERVED EFFECTS.

SUBCHRONIC TOXICOLOGY (SUMMARY):
NO SIGNIFICANT ADVERSE EFFECTS WERE FOUND IN STUDIES USING REPEATED DERMAL APPLICATIONS OF SIMILAR FORMULATIONS TO THE SKIN OF LABORATORY ANIMALS FOR 13 WEEKS AT DOSES SIGNIFICANTLY HIGHER THAN THOSE EXPECTED DURING NORMAL INDUSTRIAL EXPOSURE. THE ANIMALS WERE EVALUATED EXTENSIVELY FOR EFFECTS OF EXPOSURE (HEMATOLOGY, SERUM CHEMISTRY, URINALYSIS, ORGAN WEIGHTS, MICROSCOPIC EXAMINATION OF TISSUES ETC.).

REPRODUCTIVE TOXICOLOGY (SUMMARY):
NO TERATOGENIC EFFECTS WOULD BE EXPECTED FROM DERMAL EXPOSURE, BASED ON LABORATORY DEVELOPMENTAL TOXICITY STUDIES OF MAJOR COMPONENTS IN THIS FORMULATION AND/OR MATERIALS OF SIMILAR COMPOSITION.

CHRONIC TOXICOLOGY (SUMMARY):
REPEATED AND/OR PROLONGED EXPOSURE MAY CAUSE IRRITATION TO THE SKIN, EYES OR RESPIRATORY TRACT. OVEREXPOSURE TO OIL MIST MAY RESULT IN OIL DROPLET DEPOSITION AND/OR GRANULOMA FORMATION.

FO.. MINERAL BASE OILS:
BASE OILS IN THIS PRODUCT ARE SEVERELY SOLVENT REFINED AND/OR SEVERELY HYDROTREATED. CHRONIC MOUSE SKIN PAINTING STUDIES OF SEVERELY TREATED OILS

SHOWED NO EVIDENCE OF CARCINOGENIC EFFECTS. THESE RESULTS ARE CONFIRMED ON A CONTINUING BASIS USING VARIOUS SCREENING METHODS SUCH AS MODIFIED AMES TEST, IP-346, AND/OR OTHER ANALYTICAL METHODS.

FOR SYNTHETIC BASE OILS:
THE BASE OILS IN THIS PRODUCT HAVE BEEN TESTED IN THE AMES ASSAY AND OTHER TESTS OF MUTAGENICITY WITH NEGATIVE RESULTS. THESE BASE OILS ARE NOT EXPECTED TO BE CARCINOGENIC WITH CHRONIC DERMAL EXPOSURES.

SENSITIZATION (SUMMARY):
NOT EXPECTED TO BE SENSITIZING BASED ON TESTS OF THIS PRODUCT, COMPONENTS, OR SIMILAR PRODUCTS.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE AND EFFECTS:
IN THE ABSENCE OF SPECIFIC ENVIRONMENTAL DATA FOR THIS PRODUCT, THIS ASSESSMENT IS BASED ON INFORMATION FOR REPRESENTATIVE PRODUCTS. WHEN RELEASED INTO THE ENVIRONMENT, ADSORPTION TO SEDIMENT AND SOIL WILL BE THE PREDOMINANT BEHAVIOR. AVAILABLE ECOTOXICITY DATA (LL50 >1000 MG/L) INDICATES THAT ADVERSE EFFECTS TO AQUATIC ORGANISMS ARE NOT EXPECTED FROM THIS PRODUCT. BIOACCUMULATION IS UNLIKELY DUE TO THE VERY LOW WATER SOLUBILITY OF THIS PRODUCT, THEREFORE BIOAVAILABILITY TO AQUATIC ORGANISMS IS MINIMAL. THIS PRODUCT IS EXPECTED TO BE INHERENTLY BIODEGRADABLE.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:
PRODUCT IS SUITABLE FOR BURNING IN AN ENCLOSED, CONTROLLED BURNER FOR FUEL VALUE. SUCH BURNING MAY BE LIMITED PURSUANT TO THE RESOURCE CONSERVATION AND RECOVERY ACT. IN ADDITION, THE PRODUCT IS SUITABLE FOR PROCESSING BY AN APPROVED RECYCLING FACILITY OR CAN BE DISPOSED OF AT AN APPROPRIATE GOVERNMENT WASTE DISPOSAL FACILITY. USE OF THESE METHODS IS SUBJECT TO USER COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS AND CONSIDERATION OF PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

RCRA INFORMATION:
THE UNUSED PRODUCT, IN OUR OPINION, IS NOT SPECIFICALLY LISTED BY THE EPA AS A HAZARDOUS WASTE (40 CFR, PART 261D), NOR IS IT FORMULATED TO CONTAIN MATERIALS WHICH ARE LISTED HAZARDOUS WASTES. IT DOES NOT EXHIBIT THE HAZARDOUS CHARACTERISTICS OF IGNITABILITY, CORROSIVITY, OR REACTIVITY. THE UNUSED PRODUCT IS NOT FORMULATED WITH SUBSTANCES COVERED BY THE TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP). HOWEVER, USED PRODUCT MAY BE REGULATED.

14. TRANSPORT INFORMATION

USA DOT: NOT REGULATED BY USA DOT.

RID/ADR: NOT REGULATED BY RID/ADR.

IMO: NOT REGULATED BY IMO.

I: .: NOT REGULATED BY IATA.

STATIC ACCUMULATOR (50 PICOSIEMENS OR LESS): YES

15. REGULATORY INFORMATION

US OSHA HAZARD COMMUNICATION STANDARD:
WHEN USED FOR ITS INTENDED PURPOSES, THIS PRODUCT IS NOT CLASSIFIED AS HAZARDOUS IN ACCORDANCE WITH OSHA 29 CFR 1910.1200.

EU LABELING:
PRODUCT IS NOT DANGEROUS AS DEFINED BY THE EUROPEAN UNION DANGEROUS SUBSTANCES/PREPARATIONS DIRECTIVES. EU LABELING NOT REQUIRED.

GOVERNMENTAL INVENTORY STATUS:
ALL COMPONENTS COMPLY WITH TSCA, AICS AND DSL.

U.S. SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) TITLE III:
THIS PRODUCT CONTAINS NO "EXTREMELY HAZARDOUS SUBSTANCES".

SARA (311/312) REPORTABLE HAZARD CATEGORIES: NONE.

THIS PRODUCT CONTAINS NO CHEMICALS SUBJECT TO THE SUPPLIER NOTIFICATION REQUIREMENTS OF SARA (313) TOXIC RELEASE PROGRAM.

THIS PRODUCT HAS BEEN AUTHORIZED BY USDA FOR USE UNDER THE FOLLOWING CATEGORY:

THIS PRODUCT IS ACCEPTABLE AS A LUBRICANT WHERE THERE IS NO POSSIBILITY OF FOOD CONTACT (COMPLIES WITH EARLIER USDA GUIDELINES FOR H-2 LUBRICANT USE).

THE FOLLOWING PRODUCT INGREDIENTS ARE CITED ON THE LISTS BELOW:

CHEMICAL NAME	CAS NUMBER	LIST CITATIONS

NO REPORTABLE INGREDIENTS

REGULATORY LISTS SEARCHED:
1=ACGIH ALL
2=ACGIH A1
3=ACGIH A2
4=NTP CARC
5=NTP SUS
6=IARC 1
7=IARC 2A
8=IARC 2B
9=OSHA CARC
10=OSHA Z
11=TSCA 4

12=TSCA 5A2
13=TSCA 5E
14=TSCA 6
15=TSCA 12B
16=CA P65 CARC
17=CA P65 REPRO
18=CA RTK
19=FL RTK
20=IL RTK
21=LA RTK
22=MI 293
23=MN RTK
24=NJ RTK
25=PA RTK
26=RI RTK

CODE KEY:
CARC=CARCINOGEN
SUS=SUSPECTED CARCINOGEN
REPRO=REPRODUCTIVE

16. OTHER INFORMATION

USE: STEAM TURBINE OIL

NOTE:
PRODUCTS OF EXXON MOBIL CORPORATION AND ITS AFFILIATED COMPANIES ARE NOT FORMULATED TO CONTAIN PCBS.

HEALTH STUDIES HAVE SHOWN THAT MANY HYDROCARBONS POSE POTENTIAL HUMAN HEALTH RISKS WHICH MAY VARY FROM PERSON TO PERSON. INFORMATION PROVIDED ON THIS MSDS REFLECTS INTENDED USE. THIS PRODUCT SHOULD NOT BE USED FOR OTHER APPLICATIONS. IN ANY CASE, THE FOLLOWING ADVICE SHOULD BE CONSIDERED:

INJECTION INJURY WARNING:
IF PRODUCT IS INJECTED INTO OR UNDER THE SKIN, OR INTO ANY PART OF THE BODY, REGARDLESS OF THE APPEARANCE OF THE WOUND OR ITS SIZE, THE INDIVIDUAL SHOULD BE EVALUATED IMMEDIATELY BY A PHYSICIAN AS A SURGICAL EMERGENCY. EVEN THOUGH INITIAL SYMPTOMS FROM HIGH PRESSURE INJECTION MAY BE MINIMAL OR ABSENT, EARLY SURGICAL TREATMENT WITHIN THE FIRST FEW HOURS MAY SIGNIFICANTLY REDUCE THE ULTIMATE EXTENT OF INJURY.

INDUSTRIAL LABEL:
UNDER NORMAL CONDITIONS OF INTENDED USE, THIS PRODUCT DOES NOT POSE A RISK TO HEALTH. EXCESSIVE EXPOSURE MAY RESULT IN EYE, SKIN OR RESPIRATORY IRRITATION. ALWAYS OBSERVE GOOD HYGIENE MEASURES.

FIRST AID:
WASH SKIN WITH SOAP AND WATER. FLUSH EYES WITH WATER. IF OVERCOME BY FUMES OR VAPOR, REMOVE TO FRESH AIR. IF INGESTED DO NOT INDUCE VOMITING. IF SYMPTOMS PERSIST SEEK MEDICAL ASSISTANCE. READ AND UNDERSTAND THE MSDS BEFORE USING THIS PRODUCT.

FOR INTERNAL USE ONLY:
MHC: 1* 1* 1* 1* *1
M .C: A
TRN: 600114-00
CMCS97: 972965
REQ: US - MARKETING
SAFE USE: L
EHS APPROVAL DATE: 21 AUG 2001

LEGALLY REQUIRED INFORMATION IS GIVEN IN ACCORDANCE WITH APPLICABLE INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING ANY LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS. USE OR RE-TRANSMISSION OF THE INFORMATION CONTAINED HEREIN IN ANY OTHER FORMAT THAN THE FORMAT AS PRESENTED IS STRICTLY PROHIBITED. MOBIL NEITHER REPRESENTS NOR WARRANTS THAT THE FORMAT, CONTENT OR PRODUCT FORMULAS CONTAINED IN THIS DOCUMENT COMPLY WITH THE LAWS OF ANY OTHER COUNTRY EXCEPT THE UNITED STATES OF AMERICA.

EXXON MOBIL

PRODUCT NAME: MOBIL DTE 732

REVISION DATE: 01 DEC 2006

MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT:

PRODUCT NAME: MOBIL DTE 732

PRODUCT DESCRIPTION: BASE OIL AND ADDITIVES

PRODUCT CODE: 607200-00, 97AS85

INTENDED USE: TURBINE OIL

COMPANY IDENTIFICATION:

SUPPLIER:
EXXON MOBIL CORPORATION
3225 GALLOWS RD.
FAIRFAX, VA. 22037
USA

24 HOUR HEALTH EMERGENCY: 609-737-4411

TRANSPORTATION EMERGENCY PHONE: 800-424-9300

EXXON MOBIL TRANSPORTATION NO.: 281-834-3296

MSDS REQUESTS: 713-613-3661

PRODUCT TECHNICAL INFORMATION: 800-662-4525, 800-947-9147

MSDS INTERNET ADDRESS: HTTP://WWW.EXXON.COM, HTTP://WWW.MOBIL.COM

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

NO REPORTABLE HAZARDOUS SUBSTANCE(S) OR COMPLEX SUBSTANCE(S).

SECTION 3 HAZARDS IDENTIFICATION

THIS MATERIAL IS NOT CONSIDERED TO BE HAZARDOUS ACCORDING TO REGULATORY GUIDELINES (SEE (M)SDS SECTION 15).

POTENTIAL HEALTH EFFECTS:
LOW ORDER OF TOXICITY. EXCESSIVE EXPOSURE MAY RESULT IN EYE, SKIN, OR RESPIRATORY IRRITATION. HIGH-PRESSURE INJECTION UNDER SKIN MAY CAUSE SERIOUS DAMAGE.

NFPA HAZARD ID:
HEALTH 0
FLAMMABILITY 1
REACTIVITY 0

HMIS HAZARD ID:
HEALTH 0
FLAMMABILITY 1
REACTIVITY 0

NOTE:
THIS MATERIAL SHOULD NOT BE USED FOR ANY OTHER PURPOSE THAN THE INTENDED USE IN SECTION 1 WITHOUT EXPERT ADVICE. HEALTH STUDIES HAVE SHOWN THAT CHEMICAL EXPOSURE MAY CAUSE POTENTIAL HUMAN HEALTH RISKS WHICH MAY VARY FROM PERSON TO PERSON.

SECTION 4 FIRST AID MEASURES

INHALATION:
REMOVE FROM FURTHER EXPOSURE. FOR THOSE PROVIDING ASSISTANCE, AVOID EXPOSURE TO YOURSELF OR OTHERS. USE ADEQUATE RESPIRATORY PROTECTION. IF RESPIRATORY IRRITATION, DIZZINESS, NAUSEA, OR UNCONSCIOUSNESS OCCURS, SEEK IMMEDIATE MEDICAL ASSISTANCE. IF BREATHING HAS STOPPED, ASSIST VENTILATION WITH A MECHANICAL DEVICE OR USE MOUTH-TO-MOUTH RESUSCITATION.

SKIN CONTACT:
WASH CONTACT AREAS WITH SOAP AND WATER. IF PRODUCT IS INJECTED INTO OR UNDER THE SKIN, OR INTO ANY PART OF THE BODY, REGARDLESS OF THE APPEARANCE OF THE WOUND OR ITS SIZE, THE INDIVIDUAL SHOULD BE EVALUATED IMMEDIATELY BY A PHYSICIAN AS A SURGICAL EMERGENCY. EVEN THOUGH INITIAL SYMPTOMS FROM HIGH PRESSURE INJECTION MAY BE MINIMAL OR ABSENT, EARLY SURGICAL TREATMENT WITHIN THE FIRST FEW HOURS MAY SIGNIFICANTLY REDUCE THE ULTIMATE EXTENT OF INJURY.

EYE CONTACT:
FLUSH THOROUGHLY WITH WATER. IF IRRITATION OCCURS, GET MEDICAL ASSISTANCE.

INGESTION:
FIRST AID IS NORMALLY NOT REQUIRED. SEEK MEDICAL ATTENTION IF DISCOMFORT OCCURS.

SECTION 5 FIRE FIGHTING MEASURES

E. INGUISHING MEDIA:

APPROPRIATE EXTINGUISHING MEDIA:

USE WATER FOG, FOAM, DRY CHEMICAL OR CARBON DIOXIDE (CO2) TO EXTINGUISH FLAMES.

II PROPRIATE EXTINGUISHING MEDIA: STRAIGHT STREAMS OF WATER

FIRE FIGHTING:

FIRE FIGHTING INSTRUCTIONS:
EVACUATE AREA. PREVENT RUNOFF FROM FIRE CONTROL OR DILUTION FROM ENTERING STREAMS, SEWERS, OR DRINKING WATER SUPPLY. FIREFIGHTERS SHOULD USE STANDARD PROTECTIVE EQUIPMENT AND IN ENCLOSED SPACES, SELF-CONTAINED BREATHING APPARATUS (SCBA). USE WATER SPRAY TO COOL FIRE EXPOSED SURFACES AND TO PROTECT PERSONNEL.

HAZARDOUS COMBUSTION PRODUCTS:
SULFUR OXIDES, ALDEHYDES, OXIDES OF CARBON, INCOMPLETE COMBUSTION PRODUCTS, SMOKE, FUME

FLAMMABILITY PROPERTIES:

FLASH POINT (METHOD): >215C (419F) (ASTM D-92)

FLAMMABLE LIMITS (APPROXIMATE VOLUME % IN AIR):
LEL: 0.9
UEL: 7.0

AUTOIGNITION TEMPERATURE: N/D

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES:
IN THE EVENT OF A SPILL OR ACCIDENTAL RELEASE, NOTIFY RELEVANT AUTHORITIES IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS. U.S. REGULATIONS REQUIRE REPORTING RELEASES OF THIS MATERIAL TO THE ENVIRONMENT WHICH EXCEED THE REPORTABLE QUANTITY OR OIL SPILLS WHICH COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. THE NATIONAL RESPONSE CENTER CAN BE REACHED AT (800) 424-8802.

SPILL MANAGEMENT:

LAND SPILL:
STOP LEAK IF YOU CAN DO IT WITHOUT RISK. RECOVER BY PUMPING OR WITH SUITABLE ABSORBENT.

WATER SPILL:
STOP LEAK IF YOU CAN DO IT WITHOUT RISK. CONFINE THE SPILL IMMEDIATELY WITH BOOMS. WARN OTHER SHIPPING. REMOVE FROM THE SURFACE BY SKIMMING OR WITH SUITABLE ABSORBENTS. SEEK THE ADVICE OF A SPECIALIST BEFORE USING D ERSANTS.

WATER SPILL AND LAND SPILL RECOMMENDATIONS ARE BASED ON THE MOST LIKELY

SPILL SCENARIO FOR THIS MATERIAL; HOWEVER, GEOGRAPHIC CONDITIONS, WIND, TEMPERATURE, (AND IN THE CASE OF A WATER SPILL) WAVE AND CURRENT DIRECTION AND SPEED MAY GREATLY INFLUENCE THE APPROPRIATE ACTION TO BE TAKEN. FOR THIS REASON, LOCAL EXPERTS SHOULD BE CONSULTED.

NOTE: LOCAL REGULATIONS MAY PRESCRIBE OR LIMIT ACTION TO BE TAKEN.

ENVIRONMENTAL PRECAUTIONS:

LARGE SPILLS:
DIKE FAR AHEAD OF LIQUID SPILL FOR LATER RECOVERY AND DISPOSAL. PREVENT ENTRY INTO WATERWAYS, SEWERS, BASEMENTS OR CONFINED AREAS.

SECTION 7 HANDLING AND STORAGE

HANDLING: PREVENT SMALL SPILLS AND LEAKAGE TO AVOID SLIP HAZARD.

STATIC ACCUMULATOR: THIS MATERIAL IS A STATIC ACCUMULATOR.

STORAGE: DO NOT STORE IN OPEN OR UNLABELLED CONTAINERS.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS/STANDARDS FOR MATERIALS THAT CAN BE FORMED WHEN HANDLING THIS PRODUCT:

WHEN MISTS / AEROSOLS CAN OCCUR, THE FOLLOWING ARE RECOMMENDED:
5 MG/M3 - ACGIH TLV
10 MG/M3 - ACGIH STEL
5 MG/M3 - OSHA PEL.

NOTE:
LIMITS/STANDARDS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.

ENGINEERING CONTROLS:

THE LEVEL OF PROTECTION AND TYPES OF CONTROLS NECESSARY WILL VARY DEPENDING UPON POTENTIAL EXPOSURE CONDITIONS. CONTROL MEASURES TO CONSIDER:
NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

PERSONAL PROTECTION:
PERSONAL PROTECTIVE EQUIPMENT SELECTIONS VARY BASED ON POTENTIAL EXPOSURE CONDITIONS SUCH AS APPLICATIONS, HANDLING PRACTICES, CONCENTRATION AND VENTILATION. INFORMATION ON THE SELECTION OF PROTECTIVE EQUIPMENT FOR USE WITH THIS MATERIAL, AS PROVIDED BELOW, IS BASED UPON INTENDED, NORMAL USAGE.

RESPIRATORY PROTECTION:

IF ENGINEERING CONTROLS DO NOT MAINTAIN AIRBORNE CONTAMINANT CONCENTRATIONS

AT A LEVEL WHICH IS ADEQUATE TO PROTECT WORKER HEALTH, AN APPROVED RESPIRATOR MAY BE APPROPRIATE. RESPIRATOR SELECTION, USE, AND MAINTENANCE MUST BE IN ACCORDANCE WITH REGULATORY REQUIREMENTS, IF APPLICABLE. TYPES OF RESPIRATORS TO BE CONSIDERED FOR THIS MATERIAL INCLUDE:
NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

FOR HIGH AIRBORNE CONCENTRATIONS, USE AN APPROVED SUPPLIED-AIR RESPIRATOR, OPERATED IN POSITIVE PRESSURE MODE. SUPPLIED AIR RESPIRATORS WITH AN ESCAPE BOTTLE MAY BE APPROPRIATE WHEN OXYGEN LEVELS ARE INADEQUATE, GAS/VAPOR WARNING PROPERTIES ARE POOR, OR IF AIR PURIFYING FILTER CAPACITY/RATING MAY BE EXCEEDED.

HAND PROTECTION:

ANY SPECIFIC GLOVE INFORMATION PROVIDED IS BASED ON PUBLISHED LITERATURE AND GLOVE MANUFACTURER DATA. WORK CONDITIONS CAN GREATLY EFFECT GLOVE DURABILITY; INSPECT AND REPLACE WORN OR DAMAGED GLOVES. THE TYPES OF GLOVES TO BE CONSIDERED FOR THIS MATERIAL INCLUDE:
NO PROTECTION IS ORDINARILY REQUIRED UNDER NORMAL CONDITIONS OF USE.

EYE PROTECTION:
IF CONTACT IS LIKELY, SAFETY GLASSES WITH SIDE SHIELDS ARE RECOMMENDED.

SKIN AND BODY PROTECTION:

ANY SPECIFIC CLOTHING INFORMATION PROVIDED IS BASED ON PUBLISHED LITERATURE OR MANUFACTURER DATA. THE TYPES OF CLOTHING TO BE CONSIDERED FOR THIS MATERIAL INCLUDE:
NO SKIN PROTECTION IS ORDINARILY REQUIRED UNDER NORMAL CONDITIONS OF USE.
IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE PRACTICES, PRECAUTIONS SHOULD BE TAKEN TO AVOID SKIN CONTACT.

SPECIFIC HYGIENE MEASURES:
ALWAYS OBSERVE GOOD PERSONAL HYGIENE MEASURES, SUCH AS WASHING AFTER HANDLING THE MATERIAL AND BEFORE EATING, DRINKING, AND/OR SMOKING. ROUTINELY WASH WORK CLOTHING AND PROTECTIVE EQUIPMENT TO REMOVE CONTAMINANTS. DISCARD CONTAMINATED CLOTHING AND FOOTWEAR THAT CANNOT BE CLEANED. PRACTICE GOOD HOUSEKEEPING.

ENVIRONMENTAL CONTROLS: SEE SECTIONS 6, 7, 12, 13.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES ARE GIVEN BELOW. CONSULT THE SUPPLIER IN SECTION 1 FOR ADDITIONAL DATA.

GENERAL INFORMATION:

PHYSICAL STATE: LIQUID

COLOR: AMBER

ODOR: CHARACTERISTIC

ODOR THRESHOLD: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION:

RELATIVE DENSITY (AT 15 C): 0.86

FLASH POINT (METHOD): >215C (419F) (ASTM D-92)

FLAMMABLE LIMITS (APPROXIMATE VOLUME % IN AIR):
LEL: 0.9
UEL: 7.0

AUTOIGNITION TEMPERATURE: N/D

BOILING POINT / RANGE: >316C (600F)

VAPOR DENSITY (AIR = 1): >2 AT 101 KPA

VAPOR PRESSURE: <0.013 KPA (0.1 MMHg) AT 20 C

EVAPORATION RATE (n-BUTYL ACETATE = 1): N/D

pH N/A

LOG POW (n-OCTANOL/WATER PARTITION COEFFICIENT): >3.5

SOLUBILITY IN WATER: NEGLIGIBLE

VISCOSITY:
31.9 CST (31.9 MM2/SEC) AT 40 C
5.6 CST (5.6 MM2/SEC) AT 100C

OXIDIZING PROPERTIES: SEE SECTIONS 3, 15, 16.

OTHER INFORMATION:

FREEZING POINT: N/D

MELTING POINT: N/A

POUR POINT: -18 DEG. C (0 DEG. F)

DMSO EXTRACT (MINERAL OIL ONLY), IP-346: <3 %WT

SECTION 10 STABILITY AND REACTIVITY

STABILITY: MATERIAL IS STABLE UNDER NORMAL CONDITIONS.

CONDITIONS TO AVOID: EXCESSIVE HEAT. HIGH ENERGY SOURCES OF IGNITION.

MATERIALS TO AVOID: STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS:
MATERIAL DOES NOT DECOMPOSE AT AMBIENT TEMPERATURES.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

ROUTE OF EXPOSURE	CONCLUSION / REMARKS
INHALATION:	
TOXICITY (RAT): LC50: >5000 MG/M3	MINIMALLY TOXIC. BASED ON TEST DATA FOR STRUCTURALLY SIMILAR MATERIALS.
IRRITATION: NO END POINT DATA.	NEGLIGIBLE HAZARD AT AMBIENT/NORMAL HANDLING TEMPERATURES. BASED ON ASSESSMENT OF THE COMPONENTS.
INGESTION:	
TOXICITY (RAT): LD50: >2000 MG/KG	MINIMALLY TOXIC. BASED ON TEST DATA FOR STRUCTURALLY SIMILAR MATERIALS.
SKIN:	
TOXICITY (RABBIT): LD50: >2000 MG/KG	MINIMALLY TOXIC. BASED ON TEST DATA FOR STRUCTURALLY SIMILAR MATERIALS.
IRRITATION (RABBIT): DATA AVAILABLE.	NEGLIGIBLE IRRITATION TO SKIN AT AMBIENT TEMPERATURES. BASED ON TEST DATA FOR STRUCTURALLY SIMILAR MATERIALS.
EYE:	
IRRITATION (RABBIT): DATA AVAILABLE.	MAY CAUSE MILD, SHORT-LASTING DISCOMFORT TO EYES. BASED ON TEST DATA FOR STRUCTURALLY SIMILAR MATERIALS.

CHRONIC/OTHER EFFECTS:

CONTAINS:

BASE OIL SEVERELY REFINED:
NOT CARCINOGENIC IN ANIMAL STUDIES. REPRESENTATIVE MATERIAL PASSES IP-346,

MODIFIED AMES TEST, AND/OR OTHER SCREENING TESTS. DERMAL AND INHALATION STUDIES SHOWED MINIMAL EFFECTS; LUNG NON-SPECIFIC INFILTRATION OF IMMUNE CELLS, OIL DEPOSITION AND MINIMAL GRANULOMA FORMATION. NOT SENSITIZING IN TEST ANIMALS.

ADDITIONAL INFORMATION IS AVAILABLE BY REQUEST.

THE FOLLOWING INGREDIENTS ARE CITED ON THE LISTS BELOW: NONE.

REGULATORY LISTS SEARCHED:
1 = NTP CARC
2 = NTP SUS
3 = IARC 1
4 = IARC 2A
5 = IARC 2B
6 = OSHA CARC

SECTION 12 ECOLOGICAL INFORMATION

THE INFORMATION GIVEN IS BASED ON DATA AVAILABLE FOR THE MATERIAL, THE COMPONENTS OF THE MATERIAL, AND SIMILAR MATERIALS.

ECOTOXICITY:
MATERIAL: NOT EXPECTED TO BE HARMFUL TO AQUATIC ORGANISMS.

MOBILITY:

BASE OIL COMPONENT:
LOW SOLUBILITY AND FLOATS AND IS EXPECTED TO MIGRATE FROM WATER TO THE LAND. EXPECTED TO PARTITION TO SEDIMENT AND WASTEWATER SOLIDS.

PERSISTENCE AND DEGRADABILITY:

BIODEGRADATION:
BASE OIL COMPONENT: EXPECTED TO BE INHERENTLY BIODEGRADABLE

BIOACCUMULATION POTENTIAL:

BASE OIL COMPONENT:
HAS THE POTENTIAL TO BIOACCUMULATE, HOWEVER METABOLISM OR PHYSICAL PROPERTIES MAY REDUCE THE BIOCONCENTRATION OR LIMIT BIOAVAILABILITY.

SECTION 13 DISPOSAL CONSIDERATIONS

DISPOSAL RECOMMENDATIONS BASED ON MATERIAL AS SUPPLIED. DISPOSAL MUST BE IN ACCORDANCE WITH CURRENT APPLICABLE LAWS AND REGULATIONS, AND MATERIAL CHARACTERISTICS AT TIME OF DISPOSAL.

DISPOSAL RECOMMENDATIONS:
PRODUCT IS SUITABLE FOR BURNING IN AN ENCLOSED CONTROLLED BURNER FOR FUEL

VALUE OR DISPOSAL BY SUPERVISED INCINERATION AT VERY HIGH TEMPERATURES TO PREVENT FORMATION OF UNDESIRABLE COMBUSTION PRODUCTS.

REGULATORY DISPOSAL INFORMATION:

RCRA INFORMATION:
THE UNUSED PRODUCT, IN OUR OPINION, IS NOT SPECIFICALLY LISTED BY THE EPA AS A HAZARDOUS WASTE (40 CFR, PART 261D), NOR IS IT FORMULATED TO CONTAIN MATERIALS WHICH ARE LISTED AS HAZARDOUS WASTES. IT DOES NOT EXHIBIT THE HAZARDOUS CHARACTERISTICS OF IGNITABILITY, CORROSITIVITY OR REACTIVITY AND IS NOT FORMULATED WITH CONTAMINANTS AS DETERMINED BY THE TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP). HOWEVER, USED PRODUCT MAY BE REGULATED.

EMPTY CONTAINER WARNING:

PRECAUTIONARY LABEL TEXT:
EMPTY CONTAINERS MAY RETAIN RESIDUE AND CAN BE DANGEROUS. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. DO NOT ATTEMPT TO REFILL OR CLEAN CONTAINER SINCE RESIDUE IS DIFFICULT TO REMOVE. EMPTY DRUMS SHOULD BE COMPLETELY DRAINED, PROPERLY BUNGED AND PROMPTLY RETURNED TO A DRUM RECONDITIONER. ALL CONTAINERS SHOULD BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER AND IN ACCORDANCE WITH GOVERNMENTAL REGULATIONS.

SECTION 14 TRANSPORT INFORMATION

LAND (DOT): NOT REGULATED FOR LAND TRANSPORT

LAND (TDG): NOT REGULATED FOR LAND TRANSPORT

SEA (IMDG): NOT REGULATED FOR SEA TRANSPORT ACCORDING TO IMDG-CODE

AIR (IATA): NOT REGULATED FOR AIR TRANSPORT

SECTION 15 REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD:
WHEN USED FOR ITS INTENDED PURPOSES, THIS MATERIAL IS NOT CLASSIFIED AS HAZARDOUS IN ACCORDANCE WITH OSHA 29 CFR 1910.1200.

NATIONAL CHEMICAL INVENTORY LISTING:
AICS, IECSC, DSL, EINECS, ENCS, KECI, PICCS, TSCA

EPCRA: THIS MATERIAL CONTAINS NO EXTREMELY HAZARDOUS SUBSTANCES.

SARA (311/312) REPORTABLE HAZARD CATEGORIES: NONE.

SARA (313) TOXIC RELEASE INVENTORY:

THIS MATERIAL CONTAINS NO CHEMICALS SUBJECT TO THE SUPPLIER NOTIFICATION REQUIREMENTS OF THE SARA 313 TOXIC RELEASE PROGRAM.

THE FOLLOWING INGREDIENTS ARE CITED ON THE LISTS BELOW:*

CHEMICAL NAME	CAS NUMBER	LIST CITATIONS
XYLENES	1330-20-7	5, 9

REGULATORY LISTS SEARCHED:
1 = ACGIH ALL
2 = ACGIH A1
3 = ACGIH A2
4 = OSHA Z
5 = TSCA 4
6 = TSCA 5A2
7 = TSCA 5E
8 = TSCA 6
9 = TSCA 12B
10 = CA P65 CARC
11 = CA P65 REPRO
12 = CA RTK
13 = IL RTK
14 = LA RTK
15 = MI 293
16 = MN RTK
17 = NJ RTK
18 = PA RTK
19 = RI RTK

CODE KEY:
CARC=CARCINOGEN
REPRO=REPRODUCTIVE

* EPA RECENTLY ADDED NEW CHEMICAL SUBSTANCES TO ITS TSCA SECTION 4 TEST RULES. PLEASE CONTACT THE SUPPLIER TO CONFIRM WHETHER THE INGREDIENTS IN THIS PRODUCT CURRENTLY APPEAR ON A TSCA 4 OR TSCA 12B LIST.

SECTION 16 OTHER INFORMATION

N/D = NOT DETERMINED
N/A = NOT APPLICABLE

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:
NO REVISION INFORMATION IS AVAILABLE.

THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE, TO THE BEST OF EXXON MOBIL'S KNOWLEDGE AND BELIEF, ACCURATE AND RELIABLE AS OF THE DATE ISSUED. YOU CAN CONTACT EXXON MOBIL TO INSURE THAT THIS DOCUMENT IS THE MOST CURRENT AVAILABLE FROM EXXON MOBIL. THE INFORMATION AND RECOMMENDATIONS ARE OFFERED FOR THE USER'S CONSIDERATION AND EXAMINATION. IT IS THE USER'S

RESPONSIBILITY TO SATISFY ITSELF THAT THE PRODUCT IS SUITABLE FOR THE INTENDED USE. IF BUYER REPACKAGES THIS PRODUCT, IT IS THE USER'S RESPONSIBILITY TO INSURE PROPER HEALTH, SAFETY AND OTHER NECESSARY INFORMATION IS INCLUDED WITH AND/OR ON THE CONTAINER. APPROPRIATE WARNINGS AND SAFE-HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS. ALTERATION OF THIS DOCUMENT IS STRICTLY PROHIBITED. EXCEPT TO THE EXTENT REQUIRED BY LAW, RE-PUBLICATION OR RETRANSMISSION OF THIS DOCUMENT, IN WHOLE OR IN PART, IS NOT PERMITTED. THE TERM, "EXXON MOBIL" IS USED FOR CONVENIENCE, AND MAY INCLUDE ANY ONE OR MORE OF EXXON MOBIL CHEMICAL COMPANY, EXXON MOBIL CORPORATION, OR ANY AFFILIATES IN WHICH THEY DIRECTLY OR INDIRECTLY HOLD ANY INTEREST.

INTERNAL USE ONLY:
MHC: 0, 0, 0, 0, 0, 0
PPEC: A
DGN: 7080560XUS (1012743)

IHS Dolphin Comply Plus

Comply Plus® Web v2.9.8
Global View Station User
CRAWFORD GENERATING STATION

CHEVRON

AMERICAN INDUSTRIAL OILS 115 AND ISO 22, 32, 46, 68, 100, 150, 220

File Name: **000436**
Revision Date: **1/8/1999**
Internal ID:
Internal ID:
Format: **No Format Specified**

Additional Details

MSDS Contents

NFPA

HMIS		HMIS III
Health	1	Health
Flammability	1	Flammability
Reactivity	0	Physical Hazard
PPE		PPE

More...

Primary Information
Hazards
Ingredients (13)
User-Defined
Locations
Exposure Limits
Attachments
Sites (2)
Synonyms
Parts

Print MSDS   E-mail   Service History

MATERIAL SAFETY DATA SHEET

CHEVRON AMERICAN INDUSTRIAL OILS 115 AND ISO 22, 32, 46, 68, 100, 150, 220

MSDS: 6964 REVISION #: 1 REVISION DATE: 01/08/99

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHEVRON AMERICAN INDUSTRIAL OIL

PRODUCT NUMBER(S): CPS230323 CPS230324 CPS230325 CPS230326
CPS230327 CPS230328 CPS231025 CPS253000

SYNONYM: CHEVRON AMERICAN INDUSTRIAL OIL ISO 100
CHEVRON AMERICAN INDUSTRIAL OIL ISO 150
CHEVRON AMERICAN INDUSTRIAL OIL ISO 22
CHEVRON AMERICAN INDUSTRIAL OIL ISO 220
CHEVRON AMERICAN INDUSTRIAL OIL ISO 32
CHEVRON AMERICAN INDUSTRIAL OIL ISO 46
CHEVRON AMERICAN INDUSTRIAL OIL ISO 68
CHEVRON AMERICAN INDUSTRIAL OIL 115

CHEVRON MACHINE OIL R&O ISO 100
CHEVRON MACHINE OIL R&O ISO 150
CHEVRON MACHINE OIL R&O ISO 22
CHEVRON MACHINE OIL R&O ISO 32
CHEVRON MACHINE OIL R&O ISO 46
CHEVRON MACHINE OIL R&O ISO 68
CHEVRON MACHINE OIL R&O 115

COMPANY IDENTIFICATION: CHEVRON PRODUCTS COMPANY
GLOBAL LUBRICANTS
555 MARKET ST.
ROOM 803
SAN FRANCISCO, CA 94105-2870

EMERGENCY TELEPHONE NUMBERS
HEALTH (24 HR): (800)231-0623 OR (510)231-0623 (INTERNATIONAL)
TRANSPORTATION (24 HR): CHEMTREC (800)424-9300 OR (703)527-3887
EMERGENCY INFORMATION CENTERS ARE LOCATED IN U.S.A. INT'L COLLECT CALLS ACCEPTED

PRODUCT INFORMATION: MSDS REQUESTS: (800) 414-MSDS OR (800) 414-6737
ENVIRONMENTAL, SAFETY, & HEALTH INFO: (415) 894-0703
PRODUCT INFORMATION: (800) 582-3835

2. COMPOSITION/INFORMATION ON INGREDIENTS

100.0 % CHEVRON AMERICAN INDUSTRIAL OIL
CONTAINING

COMPONENTS	AMOUNT	LIMIT/QTY	AGENCY/TYPE
LUBRICATING BASE OIL			
SEVERELY REFINED PETROLEUM DISTILLATE			
	> 98.00%	5 MG/M3 (MIST)	ACGIH TWA
		10 MG/M3 (MIST)	ACGIH STEL
		5 MG/M3 (MIST)	OSHA PEL

THE BASE OIL MAY BE A MIXTURE OF ANY OF THE FOLLOWING: CAS 64741884, CAS 64741895, CAS 64741964, CAS 64741975, CAS 64742014, CAS 64742525, CAS 64742536, CAS 64742547, CAS 64742627, CAS 64742650, OR CAS 72623837.

ADDITIVES
< 2.00%

COMPOSITION COMMENT:
ALL THE COMPONENTS OF THIS MATERIAL ARE ON THE TOXIC SUBSTANCES CONTROL ACT CHEMICAL SUBSTANCES INVENTORY.

THIS PRODUCT FITS THE ACGIH DEFINITION FOR MINERAL OIL MIST. THE ACGIH TLV IS 5 MG/M3, THE OSHA PEL IS 5 MG/M3.

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS:

EYE: NOT EXPECTED TO CAUSE PROLONGED OR SIGNIFICANT EYE IRRITATION.

SKIN:
CONTACT WITH THE SKIN IS NOT EXPECTED TO CAUSE PROLONGED OR SIGNIFICANT IRRITATION. NOT EXPECTED TO BE HARMFUL TO INTERNAL ORGANS IF ABSORBED THROUGH THE SKIN. HIGH-PRESSURE EQUIPMENT INFORMATION: ACCIDENTAL HIGH-VELOCITY INJECTION UNDER THE SKIN OF MATERIALS OF THIS TYPE MAY RESULT IN SERIOUS INJURY. SEEK MEDICAL ATTENTION AT ONCE SHOULD AN ACCIDENT LIKE THIS OCCUR. THE INITIAL WOUND AT THE INJECTION SITE MAY NOT APPEAR TO BE SERIOUS AT FIRST; BUT, IF LEFT UNTREATED, COULD RESULT IN DISFIGUREMENT OR AMPUTATION OF THE AFFECTED PART.

INGESTION: NOT EXPECTED TO BE HARMFUL IF SWALLOWED.

INHALATION:
CONTAINS A PETROLEUM-BASED MINERAL OIL. MAY CAUSE RESPIRATORY IRRITATION OR OTHER PULMONARY EFFECTS FOLLOWING PROLONGED OR REPEATED INHALATION OF OIL MIST AT AIRBORNE LEVELS ABOVE THE RECOMMENDED MINERAL OIL MIST EXPOSURE LIMIT.

4. FIRST AID MEASURES

EYE:
NO SPECIFIC FIRST AID MEASURES ARE REQUIRED BECAUSE THIS MATERIAL IS NOT EXPECTED TO CAUSE EYE IRRITATION. AS A PRECAUTION REMOVE CONTACT LENSES, IF WORN, AND FLUSH EYES WITH WATER.

SKIN:
NO SPECIFIC FIRST AID MEASURES ARE REQUIRED BECAUSE THIS MATERIAL IS NOT EXPECTED TO BE HARMFUL IF IT CONTACTS THE SKIN. AS A PRECAUTION, REMOVE CLOTHING AND SHOES IF CONTAMINATED. USE A WATERLESS HAND CLEANER, MINERAL OIL, OR PETROLEUM JELLY TO REMOVE THE MATERIAL. THEN WASH SKIN WITH SOAP AND WATER. WASH OR CLEAN CONTAMINATED CLOTHING AND SHOES BEFORE REUSE.

INGESTION:
NO SPECIFIC FIRST AID MEASURES ARE REQUIRED BECAUSE THIS MATERIAL IS NOT EXPECTED TO BE HARMFUL IF SWALLOWED. DO NOT INDUCE VOMITING. AS A PRECAUTION, GIVE THE PERSON A GLASS OF WATER OR MILK TO DRINK AND GET MEDICAL ADVICE. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

INHALATION:
IF EXPOSED TO EXCESSIVE LEVELS OF MATERIAL IN THE AIR, MOVE THE EXPOSED PERSON TO FRESH AIR. GET MEDICAL ATTENTION IF COUGHING OR RESPIRATORY DISCOMFORT OCCURS.

NOTE TO PHYSICIANS:
IN AN ACCIDENT INVOLVING HIGH-PRESSURE EQUIPMENT, THIS PRODUCT MAY BE INJECTED UNDER THE SKIN. SUCH AN ACCIDENT MAY RESULT IN A SMALL, SOMETIMES BLOODLESS, PUNCTURE WOUND. HOWEVER, BECAUSE OF ITS DRIVING FORCE, MATERIAL INJECTED INTO A FINGERTIP CAN BE DEPOSITED INTO THE PALM OF THE HAND. WITHIN 24 HOURS, THERE IS USUALLY A GREAT DEAL OF SWELLING, DISCOLORATION, AND INTENSE THROBBING PAIN. IMMEDIATE TREATMENT AT A SURGICAL EMERGENCY CENTER IS RECOMMENDED.

5. FIRE FIGHTING MEASURES

SPECIAL NOTES:
LEAKS/RUPTURES IN HIGH PRESSURE SYSTEMS USING MATERIALS OF THIS TYPE CAN CREATE A FIRE HAZARD WHEN IN THE VICINITY OF IGNITION SOURCES (EG. OPEN FLAME, PILOT LIGHTS, SPARKS, OR ELECTRIC ARCS).

FIRE CLASSIFICATION:
CLASSIFICATION (29 CFR 1910.1200): NOT CLASSIFIED BY OSHA AS FLAMMABLE OR COMBUSTIBLE.

FLAMMABLE PROPERTIES:

FLASH POINT: (COC) 349-500F (176-260C) MIN.

AUTOIGNITION: NDA

FLAMMABILITY LIMITS (% BY VOLUME IN AIR):
LOWER: NA
UPPER: NA

EXTINGUISHING MEDIA: CO2, DRY CHEMICAL, FOAM, WATER FOG

NFPA RATINGS:
HEALTH 0
FLAMMABILITY 1
REACTIVITY 0

FIRE FIGHTING INSTRUCTIONS:
THIS MATERIAL WILL BURN ALTHOUGH IT IS NOT EASILY IGNITED.

COMBUSTION PRODUCTS:
NORMAL COMBUSTION FORMS CARBON DIOXIDE AND WATER VAPOR; INCOMPLETE COMBUSTION CAN PRODUCE CARBON MONOXIDE.

6. ACCIDENTAL RELEASE MEASURES

CHEMTREC EMERGENCY NUMBER (24 HR): (800)424-9300 OR (703)527-3887 INTERNATIONAL COLLECT CALLS ACCEPTED

ACCIDENTAL RELEASE MEASURES:
STOP THE SOURCE OF THE LEAK OR RELEASE. CLEAN UP RELEASES AS SOON AS POSSIBLE, OBSERVING PRECAUTIONS IN EXPOSURE CONTROLS/PERSONAL PROTECTION. CONTAIN LIQUID TO PREVENT FURTHER CONTAMINATION OF SOIL, SURFACE WATER OR GROUNDWATER. CLEAN UP SMALL SPILLS USING APPROPRIATE TECHNIQUES SUCH AS SORBENT MATERIALS OR PUMPING. WHERE FEASIBLE AND APPROPRIATE, REMOVE CONTAMINATED SOIL. FOLLOW PRESCRIBED PROCEDURES FOR REPORTING AND RESPONDING TO LARGER RELEASES.

7. HANDLING AND STORAGE

DO NOT USE IN HIGH PRESSURE SYSTEMS IN THE VICINITY OF FLAMES, SPARKS AND HOT SURFACES. USE ONLY IN WELL VENTILATED AREAS. KEEP CONTAINER CLOSED.

DRUM IS NOT DESIGNED TO CONTAIN PRESSURE. DO NOT USE PRESSURE TO EMPTY DRUM OR DRUM MAY RUPTURE WITH EXPLOSIVE FORCE. EMPTY CONTAINERS RETAIN PRODUCT RESIDUE (SOLID, LIQUID, AND/OR VAPOR) AND CAN BE DANGEROUS. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. EMPTY DRUMS SHOULD BE COMPLETELY DRAINED, PROPERLY BUNGED, AND PROMPTLY RETURNED TO A DRUM RECONDITIONER, OR PROPERLY DISPOSED OF. AVOID CONTAMINATING SOIL OR RELEASING THIS MATERIAL INTO SEWAGE AND DRAINAGE SYSTEMS AND BODIES OF WATER.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
CONSIDER THE POTENTIAL HAZARDS OF THIS MATERIAL (SEE SECTION 3), APPLICABLE EXPOSURE LIMITS, JOB ACTIVITIES, AND OTHER SUBSTANCES IN THE WORK PLACE WHEN DESIGNING ENGINEERING CONTROLS AND SELECTING PERSONAL PROTECTIVE EQUIPMENT. IF ENGINEERING CONTROLS OR WORK PRACTICES ARE NOT ADEQUATE TO PREVENT EXPOSURE TO HARMFUL LEVELS OF THIS MATERIAL, THE PERSONAL PROTECTIVE EQUIPMENT LISTED BELOW IS RECOMMENDED. THE USER SHOULD READ AND UNDERSTAND ALL INSTRUCTIONS AND LIMITATIONS SUPPLIED WITH THE EQUIPMENT SINCE PROTECTION IS USUALLY PROVIDED FOR A LIMITED TIME OR UNDER CERTAIN CIRCUMSTANCES.

ENGINEERING CONTROLS:
USE IN A WELL-VENTILATED AREA. IF USER OPERATIONS GENERATE AN OIL MIST, USE PROCESS ENCLOSURES, LOCAL EXHAUST VENTILATION, OR OTHER ENGINEERING CONTROLS TO CONTROL AIRBORNE LEVELS BELOW THE RECOMMENDED MINERAL OIL MIST EXPOSURE LIMITS.

PERSONAL PROTECTIVE EQUIPMENT:

EYE/FACE PROTECTION:
NO SPECIAL EYE PROTECTION IS NORMALLY REQUIRED. WHERE SPLASHING IS POSSIBLE, WEAR SAFETY GLASSES WITH SIDE SHIELDS AS A GOOD SAFETY PRACTICE.

SKIN PROTECTION:
NO SPECIAL PROTECTIVE CLOTHING IS NORMALLY REQUIRED. WHERE SPLASHING IS POSSIBLE, SELECT PROTECTIVE CLOTHING DEPENDING ON OPERATIONS CONDUCTED, PHYSICAL REQUIREMENTS AND OTHER SUBSTANCES. SUGGESTED MATERIALS FOR PROTECTIVE GLOVES INCLUDE: <NITRILE> <SILVER SHIELD> <VITON>

RESPIRATORY PROTECTION:
NO RESPIRATORY PROTECTION IS NORMALLY REQUIRED. IF USER OPERATIONS GENERATE AN OIL MIST, DETERMINE IF AIRBORNE CONCENTRATIONS ARE BELOW THE RECOMMENDED MINERAL OIL MIST EXPOSURE LIMITS. IF NOT WEAR A NIOSH APPROVED RESPIRATOR THAT PROVIDES ADEQUATE PROTECTION FROM MEASURED CONCENTRATIONS OF THIS MATERIAL. USE THE FOLLOWING ELEMENTS FOR AIR-PURIFYING RESPIRATORS: PARTICULATE.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION: CLEAR, COLORLESS LIQUID.

PH: NDA

VAPOR PRESSURE: NA

VAPOR DENSITY (AIR=1): NA

BOILING POINT: NDA

FREEZING POINT: NDA

MELTING POINT: NA

SOLUBILITY: SOLUBLE IN HYDROCARBON SOLVENTS; INSOLUBLE IN WATER.

SPECIFIC GRAVITY: 0.86 - 0.87 @ 15.6/15.6C

VOLATILE ORGANIC COMPOUNDS (VOC): 1.8 (WT%); 14.94 G/L APPROX.

EVAPORATION RATE: NA

VISCOSITY: 22 - 210 CST @ 40C (MIN.)

PERCENT VOLATILE (VOL): NA

10. STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS: NO DATA AVAILABLE.

CHEMICAL STABILITY: STABLE.

CONDITIONS TO AVOID: NO DATA AVAILABLE.

INCOMPATIBILITY WITH OTHER MATERIALS:
MAY REACT WITH STRONG OXIDIZING AGENTS, SUCH AS CHLORATES, NITRATES, PEROXIDES, ETC.

HAZARDOUS POLYMERIZATION: POLYMERIZATION WILL NOT OCCUR.

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS: THE EYE IRRITATION HAZARD IS BASED ON DATA FOR A SIMILAR MATERIAL.

SKIN EFFECTS: THE SKIN IRRITATION HAZARD IS BASED ON DATA FOR A SIMILAR MATERIAL.

ACUTE ORAL EFFECTS:
THE ACUTE ORAL TOXICITY IS BASED ON DATA FOR A SIMILAR MATERIAL.

ACUTE INHALATION EFFECTS:
THE ACUTE RESPIRATORY TOXICITY IS BASED ON DATA FOR A SIMILAR MATERIAL.

ADDITIONAL TOXICOLOGY INFORMATION:
THIS PRODUCT CONTAINS PETROLEUM BASE OILS WHICH MAY BE REFINED BY VARIOUS PROCESSES INCLUDING SEVERE SOLVENT EXTRACTION, SEVERE HYDROCRACKING, OR SEVERE HYDROTREATING. NONE OF THE OILS REQUIRES A CANCER WARNING UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200). THESE OILS HAVE NOT BEEN LISTED IN THE NATIONAL TOXICOLOGY PROGRAM (NTP) ANNUAL REPORT NOR HAVE THEY BEEN CLASSIFIED BY THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) AS; CARCINOGENIC TO HUMANS (GROUP 1), PROBABLY CARCINOGENIC TO HUMANS (GROUP 2A), OR POSSIBLY CARCINOGENIC TO HUMANS (GROUP 2B).

12. ECOLOGICAL INFORMATION

ECOTOXICITY: THIS MATERIAL IS NOT EXPECTED TO BE HARMFUL TO AQUATIC ORGANISMS.

ENVIRONMENTAL FATE: THIS MATERIAL IS NOT EXPECTED TO BE READILY BIODEGRADABLE.

13. DISPOSAL CONSIDERATIONS

OIL COLLECTION SERVICES ARE AVAILABLE FOR USED OIL RECYCLING OR DISPOSAL. PLACE CONTAMINATED MATERIALS IN CONTAINERS AND DISPOSE OF IN A MANNER CONSISTENT WITH APPLICABLE REGULATIONS. CONTACT YOUR SALES REPRESENTATIVE OR LOCAL ENVIRONMENTAL OR HEALTH AUTHORITIES FOR APPROVED DISPOSAL OR RECYCLING METHODS.

14. TRANSPORT INFORMATION

THE DESCRIPTION SHOWN MAY NOT APPLY TO ALL SHIPPING SITUATIONS. CONSULT 49CFR, OR APPROPRIATE DANGEROUS GOODS REGULATIONS, FOR ADDITIONAL DESCRIPTION REQUIREMENTS (E.G., TECHNICAL NAME) AND MODE-SPECIFIC OR QUANTITY-SPECIFIC SHIPPING REQUIREMENTS.

DOT SHIPPING NAME: NONE

DOT HAZARD CLASS: NONE

DOT IDENTIFICATION NUMBER: NONE

DOT PACKING GROUP: N/A

ADDITIONAL INFO:
PETROLEUM LUBRICATING OIL - NOT HAZARDOUS BY U.S. DOT. ADR/RID HAZARD CLASS - NOT APPLICABLE.

15. REGULATORY INFORMATION

SARA 311 CATEGORIES:

1.	IMMEDIATE (ACUTE) HEALTH EFFECTS:	NO
2.	DELAYED (CHRONIC) HEALTH EFFECTS:	NO
3.	FIRE HAZARD:	NO
4.	SUDDEN RELEASE OF PRESSURE HAZARD:	NO
5.	REACTIVITY HAZARD:	NO

REGULATORY LISTS SEARCHED:

01=SARA 313	11=NJ RTK	22=TSCA SECT 5(A)(2)
02=MASS RTK	12=CERCLA 302.4	23=TSCA SECT 6
03=NTP CARCINOGEN	13=MN RTK	24=TSCA SECT 12(B)
04=CA PROP 65-CARCIN	14=ACGIH TWA	25=TSCA SECT 8(A)
05=CA PROP 65-REPRO TOX	15=ACGIH STEL	26=TSCA SECT 8(D)
06=IARC GROUP 1	16=ACGIH CALC TLV	27=TSCA SECT 4(A)
07=IARC GROUP 2A	17=OSHA PEL	28=CANADIAN WHMIS
08=IARC GROUP 2B	18=DOT MARINE POLLUTANT	29=OSHA CEILING
09=SARA 302/304	19=CHEVRON TWA	30=CHEVRON STEL
10=PA RTK	20=EPA CARCINOGEN	

THE FOLLOWING COMPONENTS OF THIS MATERIAL ARE FOUND ON THE REGULATORY LISTS INDICATED.

SEVERELY REFINED PETROLEUM DISTILLATE
IS FOUND ON LISTS: 14,15,17,

EU RISK AND SAFETY LABEL PHRASES:
MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

NEW JERSEY RTK CLASSIFICATION:
UNDER THE NEW JERSEY RIGHT-TO-KNOW ACT L. 1983 CHAPTER 315 N.J.S.A. 34:5A-1 ET. SEQ., THE PRODUCT IS TO BE IDENTIFIED AS FOLLOWS: PETROLEUM OIL

WHMIS CLASSIFICATION:
THIS PRODUCT IS NOT CONSIDERED A CONTROLLED PRODUCT ACCORDING TO THE CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS.

16. OTHER INFORMATION

NFPA RATINGS:
HEALTH 0
FLAMMABILITY 1
REACTIVITY 0

HMIS RATINGS:
HEALTH 1
FLAMMABILITY 1
REACTIVITY 0

(0-LEAST, 1-SLIGHT, 2-MODERATE, 3-HIGH, 4-EXTREME, PPE:- PERSONAL PROTECTION EQUIPMENT INDEX RECOMMENDATION, *- CHRONIC EFFECT INDICATOR). THESE VALUES ARE OBTAINED USING THE GUIDELINES OR PUBLISHED EVALUATIONS PREPARED BY THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) OR THE NATIONAL PAINT AND COATING ASSOCIATION (FOR HMIS RATINGS).

REVISION STATEMENT:
CHANGES HAVE BEEN MADE THROUGHOUT THIS MATERIAL SAFETY DATA SHEET. PLEASE READ THE ENTIRE DOCUMENT.

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV	- THRESHOLD LIMIT VALUE	TWA	- TIME WEIGHTED AVERAGE
STEL	- SHORT-TERM EXPOSURE LIMIT	TPQ	- THRESHOLD PLANNING QUANTITY
RQ	- REPORTABLE QUANTITY	PEL	- PERMISSIBLE EXPOSURE LIMIT
C	- CEILING LIMIT	CAS	- CHEMICAL ABSTRACT SERVICE NUMBER
A1-5	- APPENDIX A CATEGORIES	()	- CHANGE HAS BEEN PROPOSED
NDA	- NO DATA AVAILABLE	NA	- NOT APPLICABLE

PREPARED ACCORDING TO THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200) AND THE ANSI MSDS STANDARD (Z400.1) BY THE TOXICOLOGY AND HEALTH RISK ASSESSMENT UNIT, CRTC, P.O. BOX 1627, RICHMOND, CA 94804

THE ABOVE INFORMATION IS BASED ON THE DATA OF WHICH WE ARE AWARE AND IS BELIEVED TO BE CORRECT AS OF THE DATE HEREOF. SINCE THIS INFORMATION MAY BE APPLIED UNDER CONDITIONS BEYOND OUR CONTROL AND WITH WHICH WE MAY BE UNFAMILIAR AND SINCE DATA MADE AVAILABLE SUBSEQUENT TO THE DATE HEREOF MAY SUGGEST MODIFICATION OF THE INFORMATION, WE DO NOT ASSUME ANY RESPONSIBILITY FOR THE RESULTS OF ITS USE. THIS INFORMATION IS FURNISHED UPON CONDITION THAT THE PERSON RECEIVING IT SHALL MAKE HIS OWN DETERMINATION OF THE SUITABILITY OF THE MATERIAL FOR HIS PARTICULAR PURPOSE.

ATTACHMENT 9

TABLE 4

CRAWFORD 3-YEAR SUMMARY OF ADDITIONS TO SOUTH DETENTION BASIN

(COVERS COAL WASHDOWN PLUS FLOOD EVENTS BEYOND NORMAL STORMWATER FLOWS)

DATE	MATERIAL ADDED	TRANSPORTER	Estimated Quantity	SEE FOOT NOTES	ORIGINS	COMMENTS
7/28/2010	OILY WATER	FUTURE	GALS	A	FLOODED TURBINE BASEMENT	
7/28/2010	OILY WATER	FUTURE	GALS	A	FLOODED TURBINE BASEMENT	
7/29/2010	OILY WATER	FUTURE	GALS	A	FLOODED TURBINE BASEMENT	
7/29/2010	OILY WATER	FUTURE	GALS	A	FLOODED TURBINE BASEMENT	
7/30/2010	OILY WATER	FUTURE	GALS	A	FLOODED TURBINE BASEMENT	
7/31/2010	OILY WATER	FUTURE	GALS	A	FLOODED TURBINE BASEMENT	
7/31/2010	OILY WATER	FUTURE	GALS	A	FLOODED TURBINE BASEMENT	
8/5/2010	OILY WATER	FUTURE	GALS	A	FLOODED TURBINE BASEMENT	
8/5/2010	OILY WATER	FUTURE	GALS	A	FLOODED TURBINE BASEMENT	
8/5/2010	OILY WATER	FUTURE	GALS	A	FLOODED TURBINE BASEMENT	
8/5/2010	OILY WATER	FUTURE	GALS	A	FLOODED TURBINE BASEMENT	
8/6/2010	OILY WATER	FUTURE	GALS	A	FLOODED TURBINE BASEMENT	
8/7/2010	OILY WATER	FUTURE	GALS	A	FLOODED TURBINE BASEMENT	
8/9/2010	OILY WATER	FUTURE	GALS	A	FLOODED TURBINE BASEMENT	PUMPED OUT RESPONSE TANKS FOR VEOLIA
8/13/2010	OILY WATER	FUTURE	GALS	A	FLOODED TURBINE BASEMENT	PUMPED OUT RESPONSE TANKS FOR VEOLIA
		SUB TOTAL:				
7/28/2010	STORMWATER	ON SITE PUMPING	GALS	B	FLOODED TURBINE BASEMENT	OPERATING UNDER NPDES VARIANCE
7/29/2010	STORMWATER	ON SITE PUMPING	GALS	B	FLOODED TURBINE BASEMENT	OPERATING UNDER NPDES VARIANCE
7/30/2010	STORMWATER	ON SITE PUMPING	GALS	B	FLOODED TURBINE BASEMENT	OPERATING UNDER NPDES VARIANCE
7/31/2010	STORMWATER	ON SITE PUMPING	GALS	B	FLOODED TURBINE BASEMENT	OPERATING UNDER NPDES VARIANCE
8/1/2010	STORMWATER	ON SITE PUMPING	GALS	B	FLOODED TURBINE BASEMENT	OPERATING UNDER NPDES VARIANCE
8/2/2010	STORMWATER	ON SITE PUMPING	GALS	B	FLOODED TURBINE BASEMENT	OPERATING UNDER NPDES VARIANCE
8/3/2010	STORMWATER	ON SITE PUMPING	GALS	B	FLOODED TURBINE BASEMENT	OPERATING UNDER NPDES VARIANCE
8/4/2010	STORMWATER	ON SITE PUMPING	GALS	B	FLOODED TURBINE BASEMENT	OPERATING UNDER NPDES VARIANCE
8/5/2010	STORMWATER	ON SITE PUMPING	GALS	B	FLOODED TURBINE BASEMENT	OPERATING UNDER NPDES VARIANCE
8/6/2010	STORMWATER	ON SITE PUMPING	GALS	B	FLOODED TURBINE BASEMENT	OPERATING UNDER NPDES VARIANCE
8/7/2010	STORMWATER	ON SITE PUMPING	GALS	B	FLOODED TURBINE BASEMENT	OPERATING UNDER NPDES VARIANCE
8/8/2010	STORMWATER	ON SITE PUMPING	GALS	B	FLOODED TURBINE BASEMENT	OPERATING UNDER NPDES VARIANCE
8/9/2010	STORMWATER	ON SITE PUMPING	GALS	B	FLOODED TURBINE BASEMENT	OPERATING UNDER NPDES VARIANCE
		SUB TOTAL:				
7/28/10 - 8/30/10	ACCELL CLEAN	ON SITE PERSONNEL	GALS	C	ADDITIVE FOR IMPROVED OIL REMOVAL	
		SUB TOTAL:				
10/2008 - 10/2011	COAL CONVEYOR WASHDOWN	ON SITE DRAINAGE	GALS	D	WEEKLY OR BI-WEEKLY OPERATIONS	PREVENTIVE MAINTENANCE IN COAL AREAS

FOOTNOTES

A: Assumes 3,000 gallons was transferred to South Detention Basin from water layer of each truckload of skimmed turbine oil during basement flood response.
Basis; conversations with Future Environmental.

#REF!

B: Assumes 2.5 million gallons, pumped equally over 13 day period. Assumes all water pumped from basement for flood response went to South Basin, although some did go to Basin 15.

C: Assumes all Accell Clean utilized for oil disperant purposes was added to, or eventually pumped to, South Detention Basin, although some was added directly to turbine basement.

D: No estimate of washdown drainage volumes added to south detention basin were able to be made.
The facility does not maintain records of specific washdown dates or the water volumes used.

TABLE 5

CRAWFORD 3-YEAR SUMMARY OF REMOVALS FROM SOUTH DETENTION BASIN

(COVERS EVENTS BEYOND NORMAL STORMWATER FLOWS)

DATE	MATERIAL REMOVED	TRANSPORTER	DISPOSAL FACILITY	Treatment Reccle Disposal	REMOVED FROM BASIN 9	UNITS	SEE FOOT NOTES	COMMENTS
COAL FINES								
11/8/2010	COAL FINES	STAYED ON SITE	RECLAIMED	**Recycled**	320	CU YARDS	A	G.J.BEEMSTERBOER CONTRACTOR JOB, EXCAVATOR
11/9/2010	COAL FINES	STAYED ON SITE	RECLAIMED	**Recycled**	320	CU YARDS	A	G.J.BEEMSTERBOER CONTRACTOR JOB, EXCAVATOR
11/10/2010	COAL FINES	STAYED ON SITE	RECLAIMED	**Recycled**	320	CU YARDS	A	G.J.BEEMSTERBOER CONTRACTOR JOB, EXCAVATOR
11/11/2010	COAL FINES	STAYED ON SITE	RECLAIMED	**Recycled**	320	CU YARDS	A	G.J.BEEMSTERBOER CONTRACTOR JOB, EXCAVATOR
OILY LIQUIDS								
10/8/2010	OIL LAYER ON TOP OF BASIN	FUTURE	ORTEK	**Disposed**	2000	GALS	B	FLOODED TURBINE BASEMENT
10/11/2010	OIL LAYER ON TOP OF BASIN	FUTURE	ORTEK	**Disposed**	1500	GALS	B	FLOODED TURBINE BASEMENT
					4780			
BASIN SOLIDS								
9/8/2011	BASIN SOLIDS	WM OF IL - METRO	WM LARAWAY RDF	**Disposed**	18.99	TONS	C	EXCAVATED VIA CRAWFORD PERSONNEL
9/9/2011	BASIN SOLIDS	WM OF IL - METRO	WM LARAWAY RDF	**Disposed**	23.15	TONS	C	EXCAVATED VIA CRAWFORD PERSONNEL
9/12/2011	BASIN SOLIDS	WM OF IL - METRO	WM LARAWAY RDF	**Disposed**	17.00	TONS	C	EXCAVATED VIA CRAWFORD PERSONNEL
9/14/2011	BASIN SOLIDS	WM OF IL - METRO	WM LARAWAY RDF	**Disposed**	13.36	TONS	C	EXCAVATED VIA CRAWFORD PERSONNEL
9/15/2011	BASIN SOLIDS	WM OF IL - METRO	WM LARAWAY RDF	**Disposed**	10.47	TONS	C	EXCAVATED VIA CRAWFORD PERSONNEL
9/29/2011	BASIN SOLIDS	WM OF IL - METRO	WM LARAWAY RDF	**Disposed**	11.07	TONS	C	EXCAVATED VIA CRAWFORD PERSONNEL
9/29/2011	BASIN SOLIDS	WM OF IL - METRO	WM LARAWAY RDF	**Disposed**	11.34	TONS	C	EXCAVATED VIA CRAWFORD PERSONNEL
					105.38			

FOOTNOTES

A: Material excavated out of north South Detention Basin and reclaimed by placing on coal pile and burning with other coal. Basis; conversations with R.J.Beemsterboer.

B: Skimming performed after flood emergency response.

C: Non-Special Wastestream

ATTACHMENT 10

TRI 10

Generator's Nonhazardous Waste Profile SI

Requested Disposal Facility Laraway, Countryside Profile Number 102614IL

☐ Renewal for Profile Number _____ Waste Approval Expiration Date 07-01-12 SK

A. Waste Generator Facility Information (must reflect location of waste generation/origin)

1. Generator Name: Midwest Generation - Crawford Station
2. Site Address: 3501 S. Pulaski Road
3. City/ZIP: Chicago/60623
4. State: IL
5. County: Cook
6. Contact Name/Title: Luke Ford/Environmental Specialist
7. Email Address: lford@mwgen.com
8. Phone: (773) 650-5489 9. FAX: (773) 650-5136
10. NAICS Code: 221112
11. Generator USEPA ID #: ILD044231470
12. State ID# (if applicable): 0316005761

B. Customer Information ☐ same as above

P. O. Number: 4500041102

1. Customer Name: Midwest Generation
2. Billing Address: 3501 S. Pulaski Road
3. City, State and ZIP: Chicago, IL 60623
4. Contact Name: James Schwarz
5. Contact Email: jschwarz@mwgen.com
6. Phone: (773) 650-5430 FAX: (773) 650-5136
7. Transporter Name: Luise, Inc.
8. Transporter ID # (if appl.): _____
9. Transporter Address: 1346 S. Hannah
10. City, State and ZIP: Forest Park, IL 60130

C. Waste Stream Information

1. DESCRIPTION
   a. Common Waste Name: Bottom ash fines from settling basins.
   State Waste Code(s): _____
   b. Describe Process Generating Waste or Source of Contamination:

   Clean out of the settling basins that contained bottom ash fines generated from the burning of coal.

   c. Typical Color(s): Brown
   d. Strong Odor? ☐ Yes ☑ No Describe: _____
   e. Physical State at 70°F: ☑ Solid ☐ Liquid ☐ Powder ☐ Semi-Solid or Sludge ☐ Other: _____
   f. Layers? ☑ Single layer ☐ Multi- layer ☐ NA
   g. Water Reactive? ☐ Yes ☑ No If Yes, Describe: _____
   h. Free Liquid Range (%): _____ to _____ ☑ NA(solid)
   i. pH Range: ☐ ≤2 ☐ 2.1-12.4 ☐ ≥12.5 ☐ NA(solid) ☑ Actual: 8.05
   j. Liquid Flash Point: ☐ < 140°F ☐ ≥ 140°F ☐ NA(solid) ☑ Actual: >200
   k. Flammable Solid: ☐ Yes ☑ No
   l. Physical Constituents: List all constituents of waste stream - (e.g. Soil 0-80%, Wood 0-20%): ☐ (See Attached)

Constituents (Total Composition Must be = 100%)	Lower Range	Unit of Measure	Upper Range	Unit of Measure
1. Bottom ash	100	%	100	%
2.		%		%
3.				
4.				
5.				
6.				

2. ESTIMATED QUANTITY OF WASTE AND SHIPPING INFORMATION
   a. ☐ Event ☑ Base/Ongoing (Check One)
   b. Estimated Annual Quantity: 2500 ☑ Tons ☐ Cubic Yards ☐ Drums ☐ Gallons ☐ Other (specify): _____
   c. Shipping Frequency: 140 loads Units per ☐ Month ☐ Quarter ☑ Year ☐ One Time ☐ Other
   d. Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If yes, answer e.) ☐ Yes ☑ No
   e. USDOT Shipping Description (if applicable): _____
3. SAFETY REQUIREMENTS (Handling, PPE, etc.): No

Generator's Nonhazardous Waste Profile Sheet

102614IL

D. Regulatory Status (Please check appropriate responses)

1. Is this a USEPA (40 CFR Part 261)/State hazardous waste? If yes, contact your sales representative. ☐ Yes ☑ No
2. Is this waste included in one or more of categories below (Check all that apply)? If yes, attach supporting documentation. ☐ Yes ☑ No
   - ☐ Delisted Hazardous Waste
   - ☐ Excluded Wastes Under 40 CFR 261.4
   - ☐ Treated Hazardous Waste Debris
   - ☐ Treated Characteristic Hazardous Waste
3. Is the waste from a Federal (40 CFR 300, Appendix B) or state mandated clean-up? If yes, see instructions. ☐ Yes ☑ No
4. Does the waste represented by this waste profile sheet contain radioactive material? ☐ Yes ☑ No
   a. If yes, is disposal regulated by the Nuclear Regulatory Commission? ☐ Yes ☐ No
   b. If yes, is disposal regulated by a State Agency for radioactive waste/NORM? ☐ Yes ☐ No
5. Does the waste represented by this waste profile sheet contain concentrations of regulated Polychlorinated Biphenyls (PCBs)? ☐ Yes ☑ No
   a. If yes, is disposal regulated under TSCA? ☐ Yes ☐ No
6. Does the waste contain untreated, regulated, medical or infectious waste? ☐ Yes ☑ No
7. Does the waste contain asbestos? ☐ Yes ☑ No If Yes, ☐ Friable ☐ Non Friable
8. Is this profile for remediation waste from a facility that is a major source of Hazardous Air Pollutants (Site Remediation NESHAP, 40 CFR 63 subpart GGGGG)? ☐ Yes ☑ No
   If yes, does the waste contain <500 ppmw VOHAPs at the point of determination? ☐ Yes ☐ No

E. Generator Certification (Please read and certify by signature below)

By signing this Generator's Waste Profile Sheet, I hereby certify that all:

1. Information submitted in this profile and all attached documents contain true and accurate descriptions of the waste material;
2. Relevant information within the possession of the Generator regarding known or suspected hazards pertaining to this waste has been disclosed to WM/the Contractor;
3. Analytical data attached pertaining to the profiled waste was derived from testing a representative sample in accordance with 40 CFR 261.20(c) or equivalent rules; and
4. Changes that occur in the character of the waste (i.e. changes in the process or new analytical) will be identified by the Generator and disclosed to WM (and the Contractor if applicable) prior to providing the waste to WM (and the Contractor if applicable).
5. Check all that apply:
   - ☑ Attached analytical pertains to the waste. Identify laboratory & sample ID #'s and parameters tested: Test America-ID 500-20086-1 # Pages: 14
   - ☐ Only the analyses identified on the attachment pertain to the waste (identify by laboratory & sample ID #'s and parameters tested). Attachment #: _____
   - ☐ Additional information necessary to characterize the profiled waste has been attached (other than analytical). Indicate the number of attached pages: _____
   - ☐ I am an agent signing on behalf of the Generator, and the delegation of authority to me from the Generator for this signature is available upon request.
   - ☐ By Generator process knowledge, the following waste is not a listed waste and is below all TCLP regulatory limits.

Certification Signature: _____ **Title:** Environmental Specialist

Company Name: Midwest Generation Crawford Station **Name (Print):** Luke Ford

Date: August 6, 2009

FOR WM USE ONLY

Management Method: ☒ Landfill ☐ Bioremediation ☐ Non-hazardous solidification ☐ Other: 25 Disposal (Countryside) 26 Disposal (Lanaway)

Approval Decision: ☒ Approved ☐ Not Approved

Waste Approval Expiration Date: 07-01-12

Management Facility Precautions, Special Handling Procedures or Limitation on approval: Approved as non-special waste. Not an ISPW per generator's certification. No manifest or ISWHL required. Dusty material must be wetted, bagged or containerized to prevent airborne dispersal.

- ☐ Shall not contain free liquid
- ☐ Shipment must be scheduled into disposal facility
- ☐ Approval Number must accompany each shipment
- ☐ Waste Manifest must accompany load

WM Authorization Name / Title: _____ / Joseph Kosh - WAM **Date:** 08-06-09

State Authorization (if Required): _____ **Date:** _____

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 500-20086-1

Job Description: Crawford Basin Solids

For:
Midwest Generation EME LLC
3501 South Pulaski Road
Chicago, IL 60623-4987

Attention: Elizabeth Alvarez

Approved for release.
Bonnie M Stadelmann
Project Manager II
7/27/2009 3:13 PM

Bonnie M Stadelmann
Project Manager II
bonnie.stadelmann@testamericainc.com
07/27/2009

cc: Luke Ford
Ms. Maria Race

These test results meet all the requirements of NELAC for accredited parameters.

The Lab Certification ID# is 100201.

All questions regarding this test report should be directed to the TestAmerica Project Manager whose signature appears on this report. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

Job Narrative
500-J20086-1

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

Metals
No analytical or quality issues were noted.

General Chemistry
Method(s) 9034: The sulfide matrix spike / matrix spike duplicate (MS/MSD) recoveries for sample CR-BASIN 1 (500-20086-1) in 68077 were outside control limits. The associated laboratory control sample (LCS) met acceptance criteria.

No other analytical or quality issues were noted.

SAMPLE SUMMARY

Client: Midwest Generation EME LLC

Job Number: 500-20086-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
500-20086-1	CR-BASIN 1	Solid	07/20/2009 1400	07/21/2009 1500

Elizabeth Alvarez
Midwest Generation EME LLC
3501 South Pulaski Road
Chicago, IL 60623-4987

Job Number: 500-20086-1

Client Sample ID: CR-BASIN 1
Lab Sample ID: 500-20086-1

Date Sampled: 07/20/2009 1400
Date Received: 07/21/2009 1500
Client Matrix: Solid

Analyte	Result/Qualifier	Unit	RL	Dilution
Method: TCLP-6010B		Date Analyzed:	07/23/2009 1439	
Prep Method: 3010A		Date Prepared:	07/23/2009 0933	
Arsenic	<0.050	mg/L	0.050	1.0
Barium	0.95	mg/L	0.50	1.0
Cadmium	0.016	mg/L	0.0050	1.0
Chromium	<0.025	mg/L	0.025	1.0
Lead	<0.0075	mg/L	0.0075	1.0
Selenium	<0.050	mg/L	0.050	1.0
Silver	<0.025	mg/L	0.025	1.0
Method: TCLP-7470A		Date Analyzed:	07/24/2009 1351	
Prep Method: 7470A		Date Prepared:	07/24/2009 0915	
Mercury	<0.0020	mg/L	0.0020	1.0
Method: 9034		Date Analyzed:	07/22/2009 1327	
Prep Method: 7.3.4		Date Prepared:	07/22/2009 1107	
Sulfide, Reactive	<130	mg/Kg	130	1.0
Method: 9045C		Date Analyzed:	07/27/2009 1222	
pH	8.05	SU	0.200	1.0
Method: Moisture		Date Analyzed:	07/22/2009 0007	
Percent Moisture	62	%	0.10	1.0

QUALITY CONTROL RESULTS

Client: Midwest Generation EME LLC

Job Number: 500-20086-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 500-68071					
LB2 500-68071/2-B	TCLP SPLPW Leachate Blank	P	Solid	1311	
LB2 500-68071/2-C	TCLP SPLPW Leachate Blank	P	Solid	1311	
500-20086-1	CR-BASIN 1	P	Solid	1311	
Prep Batch: 500-68135					
LCS 500-68135/4-A	Lab Control Sample	T	Water	3010A	
LB2 500-68071/2-B	TCLP SPLPW Leachate Blank	P	Solid	3010A	500-68071
500-20086-1	CR-BASIN 1	P	Solid	3010A	500-68071
Analysis Batch:500-68201					
LB2 500-68071/2-B	TCLP SPLPW Leachate Blank	P	Solid	6010B	500-68135
LCS 500-68135/4-A	Lab Control Sample	T	Water	6010B	500-68135
500-20086-1	CR-BASIN 1	P	Solid	6010B	500-68135
Prep Batch: 500-68237					
LCS 500-68237/2-A	Lab Control Sample	T	Water	7470A	
MB 500-68237/1-A	Method Blank	T	Water	7470A	
LB2 500-68071/2-C	TCLP SPLPW Leachate Blank	P	Solid	7470A	500-68071
500-20086-1	CR-BASIN 1	P	Solid	7470A	500-68071
Analysis Batch:500-68257					
LB2 500-68071/2-C	TCLP SPLPW Leachate Blank	P	Solid	7470A	500-68237
LCS 500-68237/2-A	Lab Control Sample	T	Water	7470A	500-68237
MB 500-68237/1-A	Method Blank	T	Water	7470A	500-68237
500-20086-1	CR-BASIN 1	P	Solid	7470A	500-68237

Report Basis
P = TCLP
T = Total

Client: Midwest Generation EME LLC

Job Number: 500-20086-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:500-68008					
500-20086-1	CR-BASIN 1	T	Solid	Moisture	
500-20086-1DU	Duplicate	T	Solid	Moisture	
Prep Batch: 500-68075					
LCS 500-68075/2-A	Lab Control Sample	T	Solid	7.3.4	
MB 500-68075/1-A	Method Blank	T	Solid	7.3.4	
500-20086-1	CR-BASIN 1	T	Solid	7.3.4	
500-20086-1MS	Matrix Spike	T	Solid	7.3.4	
500-20086-1MSD	Matrix Spike Duplicate	T	Solid	7.3.4	
Analysis Batch:500-68077					
LCS 500-68075/2-A	Lab Control Sample	T	Solid	9034	500-68075
MB 500-68075/1-A	Method Blank	T	Solid	9034	500-68075
500-20086-1	CR-BASIN 1	T	Solid	9034	500-68075
500-20086-1MS	Matrix Spike	T	Solid	9034	500-68075
500-20086-1MSD	Matrix Spike Duplicate	T	Solid	9034	500-68075
Analysis Batch:500-68229					
500-20086-1	CR-BASIN 1	T	Solid	9045C	

Report Basis
T = Total

Client: Midwest Generation EME LLC

Job Number: 500-20086-1

TCLP SPLPW Leachate Blank - Batch: 500-68135

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID: LB2 500-68071/2-B
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/23/2009 1420
Date Prepared: 07/23/2009 0800
Date Leached: 07/22/2009 1353

Analysis Batch: 500-68201
Prep Batch: 500-68135
Units: mg/L

Leachate Batch: 500-68071

Instrument ID: TJA ICAP 61E Trace Analy
Lab File ID: P50723A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL
Arsenic	<0.050		0.050
Barium	<0.50		0.50
Cadmium	<0.0050		0.0050
Chromium	<0.025		0.025
Lead	<0.0075		0.0075
Selenium	<0.050		0.050
Silver	<0.025		0.025

Lab Control Sample - Batch: 500-68135

Method: 6010B
Preparation: 3010A

Lab Sample ID: LCS 500-68135/4-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/23/2009 1426
Date Prepared: 07/23/2009 0800

Analysis Batch: 500-68201
Prep Batch: 500-68135
Units: mg/L

Instrument ID: TJA ICAP 61E Trace Analy
Lab File ID: P50723A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	0.100	0.0968	97	80 - 120	
Barium	2.00	1.99	100	80 - 120	
Cadmium	0.0500	0.0494	99	80 - 120	
Chromium	0.200	0.200	100	80 - 120	
Lead	0.100	0.100	100	80 - 120	
Selenium	0.100	0.0955	96	80 - 120	
Silver	0.0500	0.0485	97	80 - 120	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Midwest Generation EME LLC

Job Number: 500-20086-1

Method Blank - Batch: 500-68237

Method: 7470A
Preparation: 7470A

Lab Sample ID: MB 500-68237/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/24/2009 1342
Date Prepared: 07/24/2009 0915

Analysis Batch: 500-68257
Prep Batch: 500-68237
Units: mg/L

Instrument ID: Leeman Labs PS200 Merci
Lab File ID: N/A
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

Analyte	Result	Qual	RL
Mercury	<0.00020		0.00020

TCLP SPLPW Leachate Blank - Batch: 500-68237

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID: LB2 500-68071/2-C
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/24/2009 1349
Date Prepared: 07/24/2009 0915
Date Leached: 07/22/2009 1353

Analysis Batch: 500-68257
Prep Batch: 500-68237
Units: mg/L

Leachate Batch: 500-68071

Instrument ID: Leeman Labs PS200 Merci
Lab File ID: N/A
Initial Weight/Volume: 2.5 mL
Final Weight/Volume: 25 mL

Analyte	Result	Qual	RL
Mercury	<0.0020		0.0020

Lab Control Sample - Batch: 500-68237

Method: 7470A
Preparation: 7470A

Lab Sample ID: LCS 500-68237/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/24/2009 1344
Date Prepared: 07/24/2009 0915

Analysis Batch: 500-68257
Prep Batch: 500-68237
Units: mg/L

Instrument ID: Leeman Labs PS200 Merci
Lab File ID: N/A
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00200	0.00211	106	80 - 120	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Midwest Generation EME LLC

Job Number: 500-20086-1

Method Blank - Batch: 500-68075

Method: 9034
Preparation: 7.3.4

Lab Sample ID: MB 500-68075/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/22/2009 1325
Date Prepared: 07/22/2009 1055

Analysis Batch: 500-68077
Prep Batch: 500-68075
Units: mg/Kg

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 10.0000 g
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Sulfide, Reactive	<50		50

Lab Control Sample - Batch: 500-68075

Method: 9034
Preparation: 7.3.4

Lab Sample ID: LCS 500-68075/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/22/2009 1325
Date Prepared: 07/22/2009 1059

Analysis Batch: 500-68077
Prep Batch: 500-68075
Units: mg/Kg

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 10.0000 g
Final Weight/Volume: 10 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sulfide, Reactive	200	202	101	25 - 116	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 500-68075

Method: 9034
Preparation: 7.3.4

MS Lab Sample ID: 500-20086-1
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/22/2009 1327
Date Prepared: 07/22/2009 1112

Analysis Batch: 500-68077
Prep Batch: 500-68075

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 10.2731 g
Final Weight/Volume: 10 mL

MSD Lab Sample ID: 500-20086-1
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/22/2009 1328
Date Prepared: 07/22/2009 1116

Analysis Batch: 500-68077
Prep Batch: 500-68075

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 10.3884 g
Final Weight/Volume: 10 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Sulfide, Reactive	1	0	25 - 116	NC	50	F	F

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Midwest Generation EME LLC

Job Number: 500-20086-1

Duplicate - Batch: 500-68008

Method: Moisture
Preparation: N/A

Lab Sample ID: 500-20086-1
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 07/22/2009 0007
Date Prepared: N/A

Analysis Batch: 500-68008
Prep Batch: N/A
Units: %

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume:

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	62	62	0		
Percent Solids	38	38	0	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

DATA REPORTING QUALIFIERS

Client: Midwest Generation EME LLC

Job Number: 500-20086-1

Lab Section	Qualifier	Description
General Chemistry		
	F	MS or MSD exceeds the control limits

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60466
Phone: 708.534.5200 Fax: 708.534.5211

Chain of Custody Record

Lab Job #: 500-20086

Chain of Custody Number:

Page _____ of _____

Temperature °C of Cooler:

Report To (optional)		Bill To (optional)	
Contact:	Luke Ford	Contact:	SAME
Company:	Midwest Generation	Company:	
Address:	3501 S. Pulaski Rd	Address:	
Address:	Chicago, IL 60623	Address:	
Phone:	(773) 650-5489	Phone:	
Fax:	(773) 650-5136	Fax:	
E-Mail:	lford@mwgen.com	PO#/Reference#:	4500035133

Client: Midwest Generation
Client Project #:
Project Name: Crawford Basin Solids
Project Location/State: Crawford
Lab Project #:
Sampler: Luke Ford
Lab PM:

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Preservative	Parameter: TCLP Metals	Reactive Sulfides	pH
1		CR - Basin 1	7/20/09	14:00	1	SE		X	X	X
~~2~~		~~CR - Basin 2~~	~~7/20/09~~	~~14:00~~	~~1~~					

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None
8. Other

Comments

Page 15 of 14

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days X 5 Days ___ 10 Days ___ 15 Days _____ Other

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
[signature]	MWGEN	7/21/09	10:00	[signature]	TAL	7-21-09	1001
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
				[signature]	TA	7-22-09	500

Lab Courier:
Shipped:
Hand Delivered:

Matrix Key

WW – Wastewater	SE – Sediment
W – Water	SO – Soil
S – Soil	L – Leachate
SL – Sludge	Wi – Wipe
MS – Miscellaneous	DW – Drinking Water
OL – Oil	O – Other
A – Air	

Client Comments:

Lab Comments:

TAL-4124-500 (1pm)

Login Sample Receipt Check List

Client: Midwest Generation EME LLC

Job Number: 500-20086-1

Login Number: 20086
Creator: James, Jeff A
List Number: 1

List Source: TestAmerica Chicago

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified	True	

IL/IN

Renewal ☐ Profile Number: 102614 IL

TSR: Andrea Florin

MAS #: need new

Date to haul: 8-10-09

Profile Review

- ☑ SIC Code
- ☑ E-Mail Addresses - both generator & Wmdispsoal
- ☑ Generator Signature - Authorization box checked if not generator signature
- ☑ Declassification Page
- ☑ Analytical - Signature Page
- ☐ MSDS

- ☐ Dekalb Landfill - Dekalb County Waste Only
- ☐ Peoria City - County #2 Landfill needs county approval. E-Mail to eambroso@foth.com
  (not needed for asbestos & soil approvals)
- ☐ Prairie Hill - Non-Special Waste Only - No Asbestos - Check if approved County
- ☐ Prairie View - Will County Waste Only
- ☐ Solidification -IL Cottonwood Hills, Five Oaks, Envirofil, Milam -IN Twin Bridges & Prairie View
- ☐ Prairie View - $2.60 in County Fees
- ☐ Oak Ridge (IN) - Monofil
- ☐ Laraway - Loads need to be scheduled with Gina Stiner

Billing Information

- ☑ ISA Date Signed 2008 — If new ISA Log Date on Level 1 of Telemagic
- ☑ Exhibit A - If new Exhibit A log date on Level 2 Page 2 of Telemagic
- ☐ RMC Approval

If no ISA or Exhibit A Explanation and approval if necessary

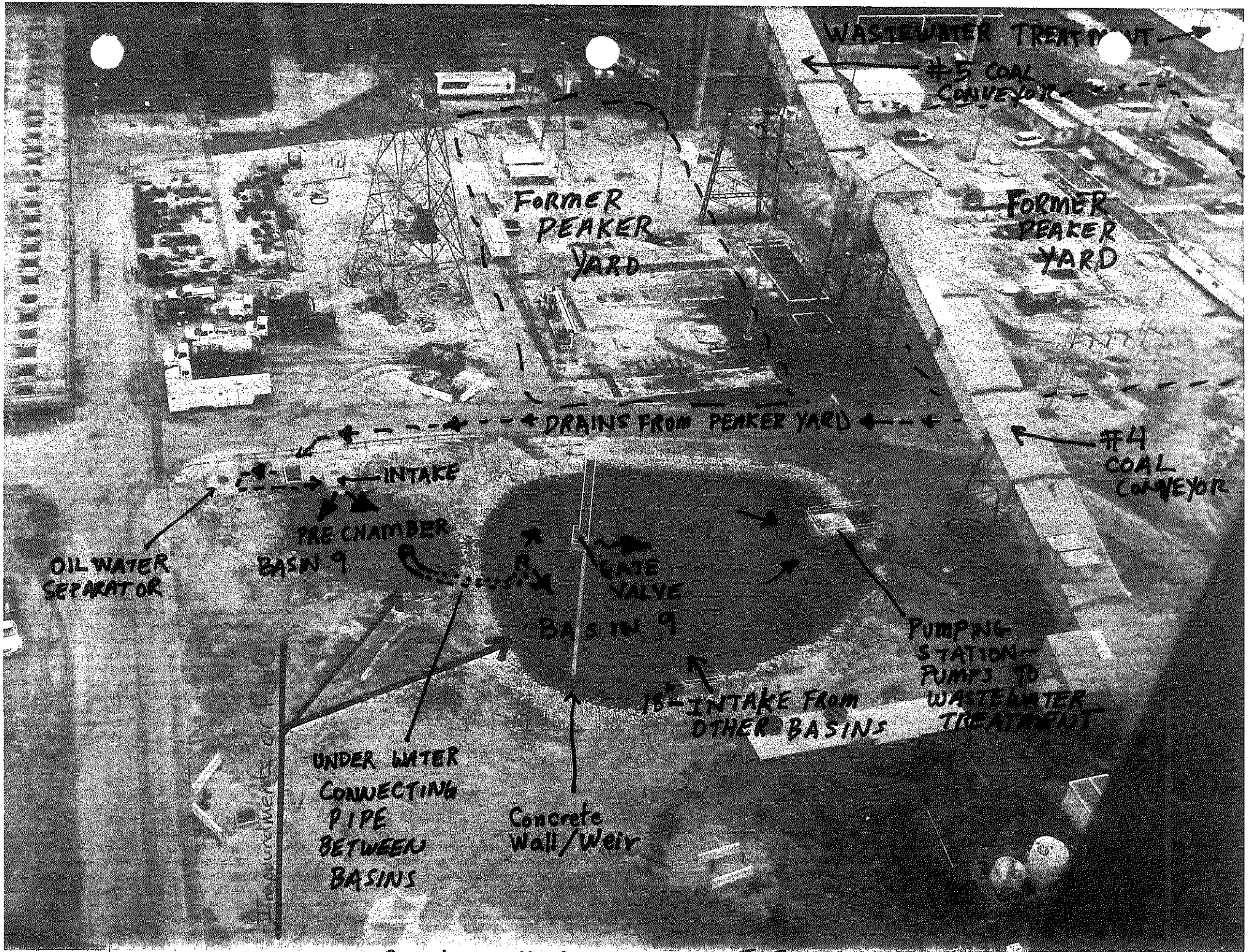
Waiting Customer

File Set Up

- ☐ Qty of Manifests Needed (0 if none needed) Send To: _____ Via: _____
  - ☐ Full Page Hazardous Waste Manifest
  - ☐ Asbestos Waste Shipment Record
  - ☐ Tracking Document
- ☐ Fastlane Set up Sheet ☐ Fastlane Verified ☐ Profile Approval Fee Done
- ☐ Contracts
- ☐ WMDisposal
- ☐ Copy to the landfill
- ☐ New ISA - record on G drive & File original in cabinet
- ☑ Telemagic Reviewed
  - ☐ MAS # Entered
  - ☐ ISA Date Entered
  - ☐ Approved to Ship Date
- ☐ Iron Mountain - Log File on G Drive

Initial Complte by TSR AF Initial Complete by ISC _____

ATTACHMENT 11



BASIN #9 AND ADJACENT STRUCTURES

DI 10/31/2011

LCD 04423147D Midwest Generation

Table 6: Identity and Purpose of Structures

Identity	Purpose
Former Peaker Yard (West of Pit 9) Undergroud Collection vaults	Foundations remain from otherwise retired and demolished jet peaker generating units. Catch any spills of oil from peaker areas and divert to Oil Water Separator (See Att. #4)
Drains from Peaker Yard	Common collection point from peaker vaults to underground Oil/Water Separator.
Wastewater Treatment Building	Enclosure for chemical addition systems for final wastewater treatment and verification.
#5 Coal Conveyor #4 Coal Conveyor	Transport coal to the main building storage bunkers Transport coal to the main building storage bunkers
Oil/Water Separator (see Attachment #3). Underground tank - access hatch visible.	Store incoming wastes from former peaker yard long enough to allow oil and water to separate.
Pre-Chamber Basin 9	Additional retention time for oil/water separation - submerged water removal so stormwater oils are not conveyed to the next retention pit. Any sheen can be removed with oil absorbant booms.
Underwater Connecting Pipe between basins	This is the submerged and buried conduit for water transport to South end of Basin 9.
Basin 9 - South End Basin 9 - Concrete Wall/Weir Basin 9 - Gate Valve Basin 9 - Intake from other Basins Basin 9 - Pumping Station Pumps to Wastewater	Additional segregation for containment of possible stormwater releated sheen. The divider of Basin 9 to keep the final volume (North side) as oil free as possible. Underwater Isolation point for preventing migration of sheen from South to North ends. Inlet pipes from other on-site stormwater collection sumps that pump to Basin 9. Submerged suction pumps transfer water only - any oil/sheen remains in the basin for removal with oil absorbant booms.

ATTACHMENT 12

12

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

July 28, 2010

Midwest Generation Crawford Generating Station Petitioner, v. ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, Respondent.	)	IEPA – 11-01 (Provisional Variance-Water)

Re: Provisional Variance From Effluent Limits Contained in NPDES Permit IL0002186 For Outfall CO1

Dear Ms. Brock:

The Illinois Environmental Protection Agency (Agency) has completed its technical review of the attached provisional variance request, dated July 26, 2010 (Attachment A) submitted by the Midwest Generation for its Crawford Generating Station. Midwest Generation has requested a variance so that it will be able to remove water from the basements of its turbine room and crusher house. Water entered the basements as the result of a severe storm that occurred on July 23 and July 24 in the Chicago area.

Based on its review, the Agency GRANTS the Midwest Generation a provisional variance for its Crawford Generating Station, subject to the specific conditions set forth below.

Background

Midwest Generation owns and operates a coal-fired steam electric generating facility (Crawford Generating Station) located in Chicago, Illinois. On July 23 and July 24, 2010, the Chicago area was hit by a very severe thunderstorm that resulted in some areas receiving over 7 inches of rain. This storm caused the basements of the turbine building and the crusher house at the Crawford Generating Station to flood, which in turn caused both units of the generating plant to trip off. Midwest Generation estimates that

approximately 3.5 million gallons of water are in the basements. The existing treatment plant lacks the capacity to provide full treatment to the flood waters in the basements, and all storage capacity at the plant has been utilized. Midwest Generation is therefore seeking a variance to allow it to discharge this water back to the Chicago and Sanitary Canal without the water receiving full treatment. The provisional variance requested is only for Outfall C01 (Recirculating Wastewater Treatment System Blowdown) and only for the parameters of Total Suspended Solids (TSS) and Oil and Grease. Midwest Generation will continue to meet all other effluent parameters of NPDES permit IL0002186 (Attachment B).

Relief Requested

The Midwest Generation Crawford Generating Station seeks a provisional variance from the effluent limits for TSS and Oil and Grease required in NPDES permit IL0002186 for Outfall C01. Based on the very poor canal water quality associated with the storm, Midwest Generation anticipates that the TSS will be in the 50-100 mg/L range, and that the oil and grease concentration will be in the 30-50 mg/L range. Current permit limits for the parameters requested in this variance for Outfall C01 require:

Parameter	Monthly Avg. (mg/l)	Daily Max. (mg/l)
TSS	15	30
Oil and Grease	15	20

Agency Determinations

The Agency has reviewed the requested provisional variance and has concluded the following:

1. Any environmental impact from the requested relief shall be closely monitored, and the Agency shall be immediately notified of any adverse impacts.

2. No reasonable alternatives appear available;

3. No public water supplies should be affected;

4. No federal regulations will preclude the granting of this request; and

5. Midwest Generation will face an arbitrary and unreasonable hardship if the request is not granted.

Conditions

The Agency hereby GRANTS Midwest Generation Crawford Generating Station a provisional variance from the effluent limits of TSS and Oil and Grease required in NPDES Permit IL0002186 for Outfall C01, subject to the following conditions:

A. The provisional variance shall begin on July 27, 2010, and shall end no later than August 10, 2010.

B. Midwest Generation shall provide the best operation of its treatment plant to produce the best effluent possible at all times. At no times shall the effluent exceed TSS of 100 mg/l and Oil and Grease of 50 mg/l.

C. Midwest Generation shall closely monitor the Chicago Sanitary and Ship Canal and immediately notify the Agency of any adverse environmental impacts as a result of this discharge.

D. Midwest Generation shall notify Roger Callaway of the Agency by telephone at 217/782-9720 when the discharge specified in this provisional variance is completed and the facility returns to normal operation. Written confirmation shall be sent within five days to the following address:

Illinois Environmental Protection Agency
Bureau of Water - Water Pollution Control
Attention: Roger Callaway
1021 North Grand Avenue East, MC #19
Springfield, Illinois 62794-9276

E. Midwest Generation shall sign a certificate of acceptance of this provisional variance and forward that certificate to Roger Callaway at the address indicated above within one day of the date of this order. The certification should take the following form:

I (We)_____, hereby accept and agree to be bound by all terms and conditions of the provisional variance granted by the Agency in _____dated _____.

_____
Petitioner

_____
Authorized Agent

_____
Title

_____
Date

Midwest Generation shall continue to monitor all parameters and all comply with all other conditions specified in its NPDES Permit No. IL0002186.

Conclusion

The Agency grants this provisional variance in accordance with its authority contained in Sections 35(b), 36 (c), and 37(b) of the Illinois Environmental Protection Act (415 ILCS 5/35(b), 36(c), and 37(b) (2004). The decision to grant this provisional variance is not intended to address compliance with any other applicable laws or regulations.

Sincerely,

John J. Kim
Chief Legal Counsel

cc: Marcia Willhite
Roger Callaway
Vera Herst

ATTACHMENT A

MIDWEST GENERATION

An EDISON INTERNATIONAL® Company

Brenda Brock
Station Director

July 27, 2010

Mr. Roger Callaway
Wastewater Compliance Unit Manager
Illinois Environmental Protection Agency
Bureau of Water
Compliance Assurance Section #19
1021 North Grand Avenue East
Springfield, IL 62702

SUBJECT: REVISED - Request for Variance NPDES Permit No. IL0002186

Dear Mr. Callaway:

Pursuant to Section 35(b) of the Illinois Environmental Protection Act, Midwest Generation Crawford Generating Station respectfully submits this application for a Provisional Variance for relief from total suspended solids (TSS), and oil and grease permit requirements for outfall C01 Recirculating Wastewater Treatment System Blowdown. The following information is being supplied in support of the provisional variance application per requirements of Title 35, Subtitle A, Chapter II, Part 180.202.

1. *A statement identifying the regulations, Board Order, or permit requirement from which the variance is requested;*

   Midwest Generation is requesting a provisional variance from the NPDES permit IL0002186 requirements of meeting the limits at Outfall C01, Recirculating Wastewater Treatment System Blowdown:

   - Total Suspended Solids (TSS) limits of 15 mg/L (30 day average) and 30 mg/L (daily maximum)
   - Oil and Grease limits of 15 mg/L (30 day average) and 20 mg/L (daily maximum)

2. *A description of the business or activity for which the variance is requested, including pertinent data on location, size, and the population and geographic area affected by the applicant's operations;*

Midwest Generation
Crawford Generating Station
3501 S. Pulaski Road
Chicago, IL 60623
Phone: (773) 650-5412
Fax: (773) 650-5136

Midwest Generation owns and operates a coal-fired steam electric generating facility located in Chicago, Illinois. Process wastewater, impacted stormwater and flows from other sources are collected and treated at Midwest Generation's on-site wastewater treatment facility, and then discharged to the Chicago Sanitary and Ship Canal (CSSC) under Midwest Generation's NPDES permit.

Midwest Generation is requesting a provisional variance for 10 days for the TSS and Oil & Grease at Outfall C01. On July 23 through July 24 the Chicago area surrounding Crawford Generating Station received in excess of 7 inches of rainfall during the storms. We have already provided the IEPA regional office in Des Plaines with verbal notification on July 24 that both generating units at Crawford Station had tripped off due to flooding in the turbine room basement. Pursuant to NPDES Permit IL0002186 Standard Conditions (Attachment H), Condition 12 (e), we notified Mr. Ricardo Ng of the IEPA Des Plaines Field Office by telephone message at approximately 3 PM on July 25 that we were experiencing a discharge of untreated stormwater from the Pit 5 collection area due to the loss of power to the pumps installed in that bilge area to transfer stormwater runoff to the wastewater treatment plant.

Due to the large volume of canal water that has flooded into the turbine room and crusher house basement; estimated in excess of 3.5 million gallons, we are unable to adequately treat the water prior to discharge back to the canal. We have also exhausted our on-site storage of waste and stormwater. Due to the volume of water that we need to discharge we do not believe that our treatment plant will provide adequate settling or chemical precipitation prior to the discharge.

3. *The quantity and typed of materials used in the process or activity for which the variance is requested, as appropriate;*

The quantity of water that is batch discharged from Outfall C01 is approximately 1.0 MGD. We plan to sample each discharge from the outfall for pH, TSS, and oil and grease so that we can provide the Agency with the results during our follow-up reports and month DMRs.

4. *The quantity, types and nature of materials or emissions to be discharged, deposited or emitted under the variance, and the identification of the receiving waterway or land, or the closest receiving Class A and Class B land use, as appropriate;*

Based on the very poor canal water quality associated with the storm events we anticipate that the TSS will be in the 50 -100 mg/L range; however, we may see some results above this concentration. The oil and grease concentrations may also be elevated in the 30 - 50 mg/L range. Again we do plan on sampling each discharge so that we can provide the Agency with the results for each discharge.

5. *The quantity and types of materials in drinking water exceeding the allowable content, or other pertinent facts concerning variances from the Board's public water supply regulations;*

   No discharge to drinking water sources from activities conducted under this provisional variance application would be expected. The receiving water, the Chicago Sanitary and Ship Canal, is a secondary contact use stream.

6. *An assessment of any adverse environmental impacts which the variance may produce;*

   We will continue to pump all of the water in the turbine basement through the wastewater treatment plant for settling and chemical treatment prior to discharge. Minimal adverse environmental impacts related to the elevated TSS and oil and grease are expected relating to the activities proposed under this provisional variance application.

7. *A statement explaining why compliance with the Act, regulations or Board Orders imposes arbitrary and unreasonable hardship;*

   Approval of this provisional variance application will allow Midwest Generation to remove the enormous quantity of water generated from a severe storm event in the City of Chicago on July 24 and July 25. Alternatives such as capturing the water for disposal impose an arbitrary and unreasonable expense to Midwest Generation. The source of the water that has flooded into the buildings at Crawford Station is from the Chicago Sanitary and Ship Canal and our plan to transfer the water back to the canal will cause little additional loading to the secondary contact waterway.

8. *A description of the proposed methods to achieve compliance with the Act, regulations or Board Order, and a timetable for achieving such compliance;*

   Midwest Generation's waiver application covers a 15-day period. Within that time frame we should have the water completely pumped down and will be able to restore the wastewater treatment plant back to normal operations.

9. *A discussion of alternative methods of compliance and the factors influencing the choice of applying for a provisional variance;*

   The options evaluated include bringing in tanker trucks or a temporary tank to collect the water until we can restore the plant to normal operation. However, the tank volume required is too large and it would be difficult to obtain such a tank and containment on short notice. It would also be impossible to bring in a fleet of tanker trucks to handle the volume of water generated from this act of God.

10. *A statement of the period, not to exceed 45 days, for which the variance is requested;*

    The requested period of the provisional variance is 15 days. The exact starting date would be July 27, 2010.

11. *A statement of whether the applicant has been granted any provisional variances within the calendar year, and the terms and duration of such variances;*

    Midwest Generation has not been granted any provisional variances within the calendar year.

12. *A statement regarding the applicant's current permit status related to the subject matter of the variance request;*

    Midwest Generation Crawford Station has an NPDES permit. The station has not had any noncompliances under this permit for over 5 years.

13. *Any Board orders in effect regarding the applicants activities and any matters currently before the Board in which the applicant is a party;*

    NA

Midwest Generation looks forward to your response. Please contact Luke Ford at (630) 771-7881 or via email at lford@mwgen.com if have any questions or require additional information.

Sincerely:

Brenda Brock
Station Director
Crawford Station

cc: Luke Ford
Maria Race
Robert Chmieleski
Elizabeth Alvarez

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276

THOMAS V. SKINNER, DIRECTOR

217/782-0610

August 15, 2001

Midwest Generation, LLC
Environmental, Health and Safety Dept.
One Financial Place
440 South LaSalle Street, Suite 3500
Chicago, Illinois 60605

RELEASABLE

Re: Midwest Generation, LLC
Crawford Generating Station
NPDES Permit No. IL0002186
Modification of NPDES Permit (After Public Notice)

Gentlemen:

The Illinois Environmental Protection Agency has reviewed the request for modification of the above-referenced NPDES Permit and issued a public notice based on that request. The final decision of the Agency is to modify the Permit as follows:

Include the intermittent discharge of impounded stormwater from the on-site dredged material disposal facility in the description of wastestreams that comprise the discharge from Outfall C01.

Enclosed is a copy of the modified Permit. You have the right to appeal this modification to the Illinois Pollution Control Board within a 35 day period following the modification date shown on the first page of the permit.

Should you have any question or comments regarding the above, please contact Beth Unser of my staff.

Very truly yours,

Thomas G. McSwiggin, P.E.
Manager, Permit Section
Division of Water Pollution Control

TGM:BAU:99101901.daa

Attachment: Modified Permit

cc: Records
Compliance Assurance Section
Des Plaines Region
US EPA
NIPC

NPDES Permit No. IL0002186

Illinois Environmental Protection Agency

Division of Water Pollution Control

1021 North Grand Avenue East

Post Office Box 19276

Springfield, Illinois 62794-9276

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Modified (NPDES) Permit

Expiration Date: April 30, 2005

Issue Date: April 24, 2000
Effective Date: May 1, 2000
Modification Date: August 15, 2001

Name and Address of Permittee:

Midwest Generation, LLC
Environmental, Health and Safety Dept.
One Financial Place
440 South LaSalle Street, Suite 3500
Chicago, Illinois 60605

Facility Name and Address:

Midwest Generation, LLC
Crawford Generating Station
3501 South Pulaski
Chicago, Illinois 60603

Discharge Number and Name:

001 Condenser Cooling Water and House Service Water
A01 Demineralizer Regenerant Wastes
B01 Unit #7 and #8 Boiler Blowdown and Boiler Drain
C01 Recirculating Wastewater Treatment System Blowdown
D01 Intake Screen Backwash
002 Area 14 Runoff (Boiler Room Area)

Receiving Waters:

Chicago Sanitary and Ship Canal

In compliance with the provisions of the Illinois Environmental Protection Act, Title 35 of Ill. Adm. Code, Subtitle C and/or Subtitle D, Chapter 1, and the Clean Water Act (CWA), the above-named permittee is hereby authorized to discharge at the above location to the above-named receiving stream in accordance with the standard conditions and attachments herein.

Permittee is not authorized to discharge after the above expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit the proper application as required by the Illinois Environmental Protection Agency (IEPA) not later than 180 days prior to the expiration date.

Thomas G. McSwiggin, P.E.
Manager, Permit Section
Division of Water Pollution Control

TGM:BAU:99101901.daa

NPDES Permit No. IL0002186

Effluent Limitations and Monitoring

PARAMETER	LOAD LIMITS lbs/day 30 DAY AVG.	LOAD LIMITS lbs/day DAILY MAX.	CONCENTRATION LIMITS mg/l 30 DAY AVG.	CONCENTRATION LIMITS mg/l DAILY MAX.	SAMPLE FREQUENCY	SAMPLE TYPE

1. From the modification date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall(s): 001 Condenser Cooling Water and House Service Water**

This discharge consists of:	Approximate Flow
1. Condenser Cooling Water	355.71 MGD
2. House Service Water	9.0 MGD
3. Demineralizer Regenerant Wastes	0.035 MGD
4. Boiler Blowdown	0.055 MGD
5. Boiler Drain	Intermittent
6. Recirculating Wastewater Treatment System Blowdown	1.05 MGD
7. Intake Screen Backwash	Intermittent

Flow (MGD)	See Special Condition 1		Daily	Continuous
Temperature	See Special Conditions 3, 4 and 5		Daily	Continuous
Total Residual Chlorine/Total Residual Oxidant*		0.2	1/Week	*Concentration Curve

*See Special Conditions 6 and 17.
**See Special Condition 18.

NPDES Permit No. IL0002186

Effluent Limitations and Monitoring

PARAMETER	LOAD LIMITS lbs/day 30 DAY AVG.	LOAD LIMITS lbs/day DAILY MAX.	CONCENTRATION LIMITS mg/l 30 DAY AVG.	CONCENTRATION LIMITS mg/l DAILY MAX.	SAMPLE FREQUENCY	SAMPLE TYPE

1. From the modification date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall(s): A01 Demineralizer Regenerant Wastes

This discharge consists of: Approximate Flow

1. Demineralizer Regenerant Wastes 0.024 MGD

Flow (MGD)	See Special Condition 1			Daily	Continuous
Total Suspended Solids		15	30	1/Month	Grab*
Oil and Grease		15	20	1/Year	Grab

*Sample type shall be 8-hour composite if the equalization tank is bypassed for maintenance purposes.

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Effluent Limitations and Monitoring

PARAMETER	LOAD LIMITS lbs/day 30 DAY AVG.	LOAD LIMITS lbs/day DAILY MAX.	CONCENTRATION LIMITS mg/l 30 DAY AVG.	CONCENTRATION LIMITS mg/l DAILY MAX.	SAMPLE FREQUENCY	SAMPLE TYPE

1. From the modification date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall(s): B01 Unit #7 and #8 Boiler Blowdown and Boiler Drain

This Discharge Consists of:					Approximate Flow	
1. Boiler Blowdown 2. Boiler Drain					0.036 MGD Intermittent	
Flow (MGD)	See Special Condition 1				Daily	Continuous
Total Suspended Solids			15	30	1/Month	8-hour Composite
Oil and Grease			15	20	1/Year	Grab

NPDES Permit No. IL0002186

Effluent Limitations and Monitoring

PARAMETER	LOAD LIMITS lbs/day 30 DAY AVG.	LOAD LIMITS lbs/day DAILY MAX.	CONCENTRATION LIMITS mg/l 30 DAY AVG.	CONCENTRATION LIMITS mg/l DAILY MAX.	SAMPLE FREQUENCY	SAMPLE TYPE

1. From the modification date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall(s): C01 Recirculating Wastewater Treatment System Blowdown**

This discharge consists of:	Approximate Flow
1. Ash sluice water	0.5 MGD
2. Ash hopper overflow	0.25 MGD
3. Coal pile runoff	Intermittent
4. Non-Chemical metal cleaning wastes	Intermittent
5. Demineralizer filter backwash	0.01 MGD
6. Boiler and turbine building floor drains	0.03 MGD
7. Fuel oil handling area runoff	Intermittent
8. Unit #7 air compressor cooling water	0.14 MGD
9. Coal storage area #2 runoff	Intermittent
10. Settling basin area #3 runoff	Intermittent
11. Ash pile area #18 runoff	Intermittent
12. Yard drainage area #15	Intermittent
13. Ash hopper area #16	Intermittent
14. South detention basin consisting of area runoff from:	Intermittent
a. Transmission terminal areas #5, 6 and 12	
b. Transformer area #7	
c. Oil storage areas #8 and 9	
d. Power block area #11	
e. Dock conveyor area #22	
15. Impounded stormwater from the dredged material disposal facility	Intermittent

Flow (MGD)	See Special Condition 1			Daily	Continuous
pH	See Special Condition 2			1/Week	Grab
Total Suspended Solids		15	30	1/Week	24 Hour Composite
Oil and Grease		15	20	1/Week	Grab
Iron		1.0	1.0	1/Month*	24 Hour Composite
Copper		0.5	1.0	1/Month*	24 Hour Composite

*The sampling frequency for total iron and total copper shall be daily during discharge of non-chemical metal cleaning wastes. At all other times the sampling frequency shall be once per month.
**See Special Condition 18.

Outfall(s): D01 Intake Screen Backwash

See Special Condition 11

Outfall: 002 Area 14 Runoff (Boiler Room Area)

See Special Condition 21.

NPDES Permit No. IL0002186

Special Conditions

SPECIAL CONDITION 1. Flow shall be reported as a daily maximum and monthly average. In the event no discharge occurs during a given month, a statement of "No discharge" shall be reported on the DMR for that month.

SPECIAL CONDITION 2. The pH shall be in the range 6.0 to 9.0. The monthly minimum and monthly maximum values shall be reported on the DMR form.

SPECIAL CONDITION 3. The receiving waters are designated as Secondary Contact and Indigenous Aquatic Life Waters by Section 302.408, Illinois Administration Code, Title 35, Chapter 1, Subtitle C, as amended. These waters shall meet the following standard:

Temperatures shall not exceed 93°F (34°C) more than 5% of the time, or 100°F (37.8°C) at any time at the edge of the mixing zone which is defined by Rule 302.102 of the above regulations.

SPECIAL CONDITION 4. In lieu of the requirements of Section 302.211(d) and (e), Illinois Administrative Code, Title 35, Subtitle C, as amended, effluent shall not alone or in combination with other sources cause temperatures in the main channel of the Lower Des Plaines River at the I-55 Bridge to exceed the temperatures set forth in the following table, except in accordance with the allowable monthly excursions detailed below:

	Jan	Feb	Mar	Apr 1-15	Apr 16-30	May 1-15	May 16-30	June 1-15	June 16-30	July	Aug	Sept	Oct	Nov	Dec
°F	60	60	65	73	80	85	90	90	91	91	91	90	85	75	65

These standards may be exceeded by no more than 3°F during 2% of the hours in the 12-month period ending December 31, except that at no time shall Midwest Generation's plants cause the water temperature at the I-55 Bridge to exceed 93°F. (Midwest Generation's plants continue to be subject to the Secondary Contact Standards at the point of discharge).

SPECIAL CONDITION 5. Permittee shall comply with all temperature limitations as imposed by the Pollution Control Board's order in AS 96-10, dated October 3, 1996.

SPECIAL CONDITION 6. Total residual oxidant shall not be discharged from any single generating unit for more than two hours per day. The daily mean concentration of total residual oxidant shall be based on a concentration curve. The concentration curve shall be generated using grab samples with a sampling frequency of five minutes or less over the exposure time. The exposure time is defined to be from the point of first detectable measurement to the point of the last detectable measurement of total residual oxidant. Concentration curves shall be submitted with Discharge Monitoring Reports. The frequency and duration of the oxidant dosing period plus the amount of chlorine or bromine applied shall be reported on the Discharge Monitoring Reports. For reporting purposes, the daily discharge shall be the average of all non-zero values measured in a day and the monthly average shall be the average of all daily discharges. Discharge Monitoring Reports shall indicate whether chlorine or bromine compounds were used during the month.

For the purpose of determining compliance, the highest single instantaneous TRC/TRO concentration measured during compliance curve sampling on any day will be regarded as the daily maximum concentration. Total residual oxidant concentration shall be measured and reported in terms of total residual chlorine.

SPECIAL CONDITION 7. This facility has the following discharges of storm water associated with industrial activity:

The east oil water separator and switch house building roof drains, which discharge to the Chicago municipal combined sewer system.

SPECIAL CONDITION 8. There shall be no discharge of polychlorinated biphenyl compounds.

SPECIAL CONDITION 9. There shall be no discharge of complexed metal bearing wastestreams and associated rinses from chemical metal cleaning unless this permit has been modified to include the new discharge.

SPECIAL CONDITION 10. Intake monitoring at Crawford Generating Station pursuant to Section 316(b) of the CWA was not required by USEPA in letters to Commonwealth Edison Company (former owner & permittee) dated February 19, 1975 and June 1, 1976. It is determined that no intake monitoring or modification is being required by IEPA for reissuance of this NPDES Permit.

SPECIAL CONDITION 11. The discharge from Outfall D01 is limited to Chicago Sanitary and Ship Canal make-up water intake screen backwash, free from other discharges. Adequate maintenance of the intake screen system is required to prevent the discharge of floating debris collected on intake screens back to the canal.

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Special Conditions

SPECIAL CONDITION 12. Samples taken in compliance with the effluent monitoring requirements shall be taken at a point representative of the discharge, but prior to entry into the receiving stream.

SPECIAL CONDITION 13. The permittee shall record monitoring results on Discharge Monitoring Report Forms using one such form for each discharge each month.

The completed Discharge Monitoring Report forms shall be submitted to IEPA no later than the 28th day of the following month, unless otherwise specified by the permitting authority.

Discharge Monitoring Reports shall be mailed to the IEPA at the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
1021 N. Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

SPECIAL CONDITION 14. The upset provisions of 40 CFR 122.41(n) are hereby incorporated by reference.

SPECIAL CONDITION 15. The Agency may modify this permit during its term to incorporate biomonitoring requirements and additional limitations or requirements based on the biomonitoring results. Modifications under this condition shall follow public notice and opportunity for hearing.

SPECIAL CONDITION 16. If an applicable effluent standard or limitation is promulgated under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act and that effluent standard or limitation is more stringent than any effluent limitation in the permit or controls a pollutant not limited in the NPDES Permit, the Agency shall revise or modify the permit in accordance with the more stringent standard or prohibition and shall so notify the permittee.

SPECIAL CONDITION 17. A discharge limit of 0.05 mg/l (instantaneous maximum) shall be achieved for total residual oxidant when bromine biocides are used for condenser biofouling control, in accordance with Special Condition 6. Total residual oxidant shall be measured and reported in terms of total residual chlorine. Construction of treatment facilities which may be necessary to meet the limit for total residual oxidant may not be started until a construction permit has been issued by the Agency.

SPECIAL CONDITION 18. The Agency has determined that the effluent limitations in this permit constitute BAT/BCT for storm water which is treated in the existing treatment facilities for purposes of this permit reissuance, and no pollution prevention plan will be required for such storm water. In addition to the chemical specific monitoring required elsewhere in this permit, the permittee shall conduct an annual inspection of the facility site to identify areas contributing to a storm water discharge associated with industrial activity, and determine whether any facility modifications have occurred which result in previously-treated storm water discharges no longer receiving treatment. If any such discharges are identified the permittee shall request a modification of this permit within 30 days after the inspection. Records of the annual inspection shall be retained by the permittee for the term of this permit and be made available to the Agency on request.

SPECIAL CONDITION 19. In the event the permittee shall require the use of water treatment additives not previously used in the station's main condensers, the permittee shall request a modification in the permit in accordance with the standard conditions, Attachment H.

SPECIAL CONDITION 20. The use or operation of this facility shall be by or under the supervision of a Certified Class K operator.

SPECIAL CONDITION 21. STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

A. A storm water pollution prevention plan shall be developed by the permittee for the storm water associated with industrial activity at this facility. The plan shall identify potential sources of pollution which may be expected to affect the quality of storm water discharges associated with the industrial activity at the facility. In addition, the plan shall describe and ensure the implementation of practices which are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility and to assure compliance with the terms and conditions of this permit.

B. The plan shall be completed within 180 days of the effective date of this permit. Plans shall provide for compliance with the terms of the plan within 365 days of the effective date of this permit. The owner or operator of the facility shall make a copy of the plan available to the Agency at any reasonable time upon request.

NPDES Permit No. IL0002186

Special Conditions

C. The permittee may be notified by the Agency at any time that the plan does not meet the requirements of this condition. After such notification, the permittee shall make changes to the plan and shall submit a written certification that the requested changes have been made. Unless otherwise provided, the permittee shall have 30 days after such notification to make the changes.

D. The discharger shall amend the plan whenever there is a change in construction, operation, or maintenance which may affect the discharge of significant quantities of pollutants to the waters of the State or if a facility inspection required by paragraph G of this condition indicates that an amendment is needed. The plan should also be amended if the discharger is in violation of any conditions of this permit, or has not achieved the general objective of controlling pollutants in storm water discharges. Amendments to the plan shall be made within the shortest reasonable period of time, and shall be provided to the Agency for review upon request.

E. The plan shall provide a description of potential sources which may be expected to add significant quantities of pollutants to storm water discharges, or which may result in non-storm water discharges from storm water outfalls at the facility. The plan shall include, at a minimum, the following items:

1. A topographic map extending one-quarter mile beyond the property boundaries of the facility, showing: the facility, surface water bodies, wells (including injection wells), seepage pits, infiltration ponds, and the discharge points where the facility's storm water discharges to a municipal storm drain system or other water body. The requirements of this paragraph may be included on the site map if appropriate.

2. A site map showing:

   i. The storm water conveyance and discharge structures;

   ii. An outline of the storm water drainage areas for each storm water discharge point;

   iii. Paved areas and buildings;

   iv. Areas used for outdoor manufacturing, storage, or disposal of significant materials, including activities that generate significant quantities of dust or particulates.

   v. Location of existing storm water structural control measures (dikes, coverings, detention facilities, etc.);

   vi. Surface water locations and/or municipal storm drain locations

   vii. Areas of existing and potential soil erosion;

   viii. Vehicle service areas;

   ix. Material loading, unloading, and access areas.

3. A narrative description of the following:

   i. The nature of the industrial activities conducted at the site, including a description of significant materials that are treated, stored or disposed of in a manner to allow exposure to storm water;

   ii. Materials, equipment, and vehicle management practices employed to minimize contact of significant materials with storm water discharges;

   iii. Existing structural and non-structural control measures to reduce pollutants in storm water discharges;

   iv. Industrial storm water discharge treatment facilities;

   v. Methods of onsite storage and disposal of significant materials;

4. A list of the types of pollutants that have a reasonable potential to be present in storm water discharges in significant quantities.

5. An estimate of the size of the facility in acres or square feet, and the percent of the facility that has impervious areas such as pavement or buildings.

6. A summary of existing sampling data describing pollutants in storm water discharges.

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Special Conditions

F. The plan shall describe the storm water management controls which will be implemented by the facility. The appropriate controls shall reflect identified existing and potential sources of pollutants at the facility. The description of the storm water management controls shall include:

1. Storm Water Pollution Prevention Personnel - Identification by job titles of the individuals who are responsible for developing, implementing, and revising the plan.

2. Preventive Maintenance - Procedures for inspection and maintenance of storm water conveyance system devices such as oil/water separators, catch basins, etc., and inspection and testing of plant equipment and systems that could fail and result in discharges of pollutants to storm water.

3. Good Housekeeping - Good housekeeping requires the maintenance of clean, orderly facility areas that discharge storm water. Material handling areas shall be inspected and cleaned to reduce the potential for pollutants to enter the storm water conveyance system.

4. Spill Prevention and Response - Identification of areas where significant materials can spill into or otherwise enter the storm water conveyance systems and their accompanying drainage points. Specific material handling procedures, storage requirements, spill clean up equipment and procedures should be identified, as appropriate. Internal notification procedures for spills of significant materials should be established.

5. Storm Water Management Practices - Storm water management practices are practices other than those which control the source of pollutants. They include measures such as installing oil and grit separators, diverting storm water into retention basins, etc. Based on assessment of the potential of various sources to contribute pollutants, measures to remove pollutants from storm water discharge shall be implemented. In developing the plan, the following management practices shall be considered:

   i. Containment - Storage within berms or other secondary containment devices to prevent leaks and spills from entering storm water runoff;

   ii. Oil & Grease Separation - Oil/water separators, booms, skimmers or other methods to minimize oil contaminated storm water discharges;

   iii. Debris & Sediment Control - Screens, booms, sediment ponds or other methods to reduce debris and sediment in storm water discharges;

   iv. Waste Chemical Disposal - Waste chemicals such as antifreeze, degreasers and used oils shall be recycled or disposed of in an approved manner and in a way which prevents them from entering storm water discharges.

   v. Storm Water Diversion - Storm water diversion away from materials manufacturing, storage and other areas of potential storm water contamination;

   vi. Covered Storage or Manufacturing Areas - Covered fueling operations, materials manufacturing and storage areas to prevent contact with storm water.

6. Sediment and Erosion Prevention - The plan shall identify areas which due to topography, activities, or other factors, have a high potential for significant soil erosion and describe measures to limit erosion.

7. Employee Training - Employee training programs shall inform personnel at all levels of responsibility of the components and goals of the storm water pollution control plan. Training should address topics such as spill response, good housekeeping and material management practices. The plan shall identify periodic dates for such training.

8. Inspection Procedures - Qualified plant personnel shall be identified to inspect designated equipment and plant areas. A tracking or follow-up procedure shall be used to ensure appropriate response has been taken in response to an inspection. Inspections and maintenance activities shall be documented and recorded.

G. The permittee shall conduct an annual facility inspection to verify that all elements of the plan, including the site map, potential pollutant sources, and structural and non-structural controls to reduce pollutants in industrial storm water discharges are accurate. Observations that require a response and the appropriate response to the observation shall be retained as part of the plan. Records documenting significant observations made during the site inspection shall be submitted to the Agency in accordance with the reporting requirements of this permit.

NPDES Permit No. IL0002186

Special Conditions

H. This plan should briefly describe the appropriate elements of other program requirements, including Spill Prevention Control and Countermeasures (SPCC) plans required under Section 311 of the CWA and the regulations promulgated thereunder, and Best Management Programs under 40 CFR 125.100.

I. The plan is considered a report that shall be available to the public under Section 308(b) of the CWA. The permittee may claim portions of the plan as confidential business information, including any portion describing facility security measures.

J. The plan shall include the signature and title of the person responsible for preparation of the plan and include the date of initial preparation and each amendment thereto.

REPORTING

K. The facility shall submit an annual inspection report to the Illinois Environmental Protection Agency. The report shall include results of the annual facility inspection which is required by Part G of the Storm Water Pollution Prevention Plan of this permit. The report shall also include documentation of any event (spill, treatment unit malfunction, etc.) which would require an inspection, results of the inspection, and any subsequent corrective maintenance activity. The report shall be completed and signed by the authorized facility employee(s) who conducted the inspection(s).

L. The first report shall contain information gathered during the one year time period beginning with the effective date of coverage under this permit and shall be submitted no later than 60 days after this one year period has expired. Each subsequent report shall contain the previous year's information and shall be submitted no later than one year after the previous year's report was due.

M. Annual inspection reports shall be mailed to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
Annual Inspection Report
1021 N. Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

N. If the facility performs inspections more frequently than required by this permit, the results shall be included as additional information in the annual report.

ATTACHMENT H

Standard Conditions

Definitions

Act means the Illinois Environmental Protection Act, Ch. 111 1-2 Ill. Rev Stat., Sec. 1001-1052 as Amended.

Agency means the Illinois Environmental Protection Agency.

Board means the Illinois Pollution Control Board.

Clean Water Act (formerly referred to as the Federal Water Pollution Control Act) means Pub. L. 92-500, as amended, 33 U.S.C. 1251 et seq.

NPDES (National Pollutant Discharge Elimination System) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318 and 405 of the Clean Water Act.

USEPA means the United States Environmental Protection Agency.

Daily Discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Maximum Daily Discharge Limitation (daily maximum) means the highest allowable daily discharge.

Average Monthly Discharge Limitation (30 day average) means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Discharge Limitation (7 day average) means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Aliquot means a sample of specified volume used to make up a total composite sample.

Grab Sample means an individual sample of at least 100 milliliters collected at a randomly-selected time over a period not exceeding 15 minutes.

24 Hour Composite Sample means a combination of at least 8 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period.

8 Hour Composite Sample means a combination of at least 3 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over an 8-hour period.

Flow Proportional Composite Sample means a combination of sample aliquots of at least 100 milliliters collected at periodic intervals such that either the time interval between each aliquot or the volume of each aliquot is proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot.

(1) Duty to comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

(2) Duty to reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. If the permittee submits a proper application as required by the Agency no later than 180 days prior to the expiration date, this permit shall continue in full force and effect until the final Agency decision on the application has been made.

(3) Need to halt or reduce activity not a defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(4) Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

(5) Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up, or auxiliary facilities, or similar systems only when necessary to achieve compliance with the conditions of the permit.

(6) Permit actions. This permit may be modified, revoked and reissued, or terminated for cause by the Agency pursuant to 40 CFR 122.62. The filing of a request by the permittee for a permit modification, revocation and reissuance or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

(7) Property rights. This permit does not convey any property rights of any sort, or any exclusive privilege.

(8) Duty to provide information. The permittee shall furnish to the Agency within a reasonable time, any information which the Agency may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also furnish to the Agency, upon request, copies of records required to be kept by this permit.

(9) Inspection and entry. The permittee shall allow an authorized representative of the Agency, upon the presentation of credentials and other documents as may be required by law, to:

(a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

(d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance, or as otherwise authorized by the Act, any substances or parameters at any location.

(10) Monitoring and records.

(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(b) The permittee shall retain records of all monitoring information, including all calibration and maintenance records, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of this permit, measurement, report or application. This period may be extended by request of the Agency at any time.

(c) Records of monitoring information shall include:

(1) The date, exact place, and time of sampling or measurements;

(2) The individual(s) who performed the sampling or measurements;

(3) The date(s) analyses were performed;

(4) The individual(s) who performed the analyses;

(5) The analytical techniques or methods used; and

(6) The results of such analyses.

(d) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit. Where no test procedure under 40 CFR Part 136 has been approved, the permittee must submit to the Agency a test method for approval. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals to ensure accuracy of measurements.

(11) Signatory requirement. All applications, reports or information submitted to the Agency shall be signed and certified.

(a) Application. All permit applications shall be signed as follows:

(1) For a corporation: by a principal executive officer of at least the level of vice president or a person or position having overall responsibility for environmental matters for the corporation;

(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.

(b) Reports. All reports required by permits, or other information requested by the Agency shall be signed by a person described in paragraph (a) or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in paragraph (a); and

(2) The authorization specifies either an individual or a position responsible for the overall operation of the facility, from which the discharge originates, such as a plant manager, superintendent or person of equivalent responsibility; and

(3) The written authorization is submitted to the Agency.

(c) **Changes of Authorization.** If an authorization under (b) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of (b) must be submitted to the Agency prior to or together with any reports, information, or applications to be signed by an authorized representative.

(12) **Reporting requirements.**

(a) **Planned changes.** The permittee shall give notice to the Agency as soon as possible of any planned physical alterations or additions to the permitted facility.

(b) **Anticipated noncompliance.** The permittee shall give advance notice to the Agency of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(c) **Compliance schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(d) **Monitoring reports.** Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(1) Monitoring results must be reported on a Discharge Monitoring Report (DMR).

(2) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

(3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Agency in the permit.

(e) **Twenty-four hour reporting.** The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The following shall be included as information which must be reported within 24 hours.

(1) Any unanticipated bypass which exceeds any effluent limitation in the permit;

(2) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Agency in the permit to be reported within 24 hours;

The Agency may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

(f) **Other noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs (12)(c), (d), or (e), at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (12)(a).

(g) **Other information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the Agency, it shall promptly submit such facts or information.

(13) **Transfer of permits.** A permit may be automatically transferred to a new permittee if:

(a) The current permittee notifies the Agency at least 30 days in advance of the proposed transfer date;

(b) The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittees; and

(c) The Agency does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement.

(14) All manufacturing, commercial, mining, and silvicultural dischargers must notify the Agency as soon as they know or have reason to believe:

(a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant identified under Section 307 of the Clean Water Act which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:

(1) One hundred micrograms per liter (100 ug/l);

(2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;

(3) Five (5) times the maximum concentration value reported for that pollutant in the NPDES permit application; or

(4) The level established by the Agency in this permit.

(b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the NPDES permit application.

(15) All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Agency of the following:

(a) Any new introduction of pollutants into that POTW from an indirect discharger which would be subject to Sections 301 or 306 of the Clean Water Act if it were directly discharging those pollutants; and

(b) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

(c) For purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

(16) If the permit is issued to a publicly owned or publicly regulated treatment works, the permittee shall require any industrial user of such treatment works to comply with federal requirements concerning:

(1) User charges pursuant to Section 204(b) of the Clean Water Act, and applicable regulations appearing in 40 CFR 35;

(2) Toxic pollutant effluent standards and pretreatment standards pursuant to Section 307 of the Clean Water Act; and

(3) Inspection, monitoring and entry pursuant to Section 308 of the Clean Water Act.

(17) If an applicable standard or limitation is promulgated under Section 301(b)(2)(C) and (D), 304(b)(2), or 307(a)(2) and that effluent standard or limitation is more stringent than any effluent limitation in the permit, or controls a pollutant not limited in the permit, the permit shall be promptly modified or revoked, and reissued to conform to that effluent standard or limitation.

(18) Any authorization to construct issued to the permittee pursuant to 35 Ill. Adm. Code 309.154 is hereby incorporated by reference as a condition of this permit.

(19) The permittee shall not make any false statement, representation or certification in any application, record, report, plan or other document submitted to the Agency or the USEPA, or required to be maintained under this permit.

(20) The Clean Water Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act is subject to a civil penalty not to exceed $10,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing Sections 301, 302, 306, 307, or 308 of the Clean Water Act is subject to a fine of not less than $2,500, nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both.

(21) The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

(22) The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit shall, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

(23) Collected screening, slurries, sludges, and other solids shall be disposed of in such a manner as to prevent entry of those wastes (or runoff from the wastes) into waters of the State. The proper authorization for such disposal shall be obtained from the Agency and is incorporated as part hereof by reference.

(24) In case of conflict between these standard conditions and any other condition(s) included in this permit, the other condition(s) shall govern.

(25) The permittee shall comply with, in addition to the requirements of the permit, all applicable provisions of 35 Ill. Adm. Code, Subtitle C, Subtitle D, Subtitle E, and all applicable orders of the Board.

(26) The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit is held invalid, the remaining provisions of this permit shall continue in full force and effect.

NOV/IR

Land and Chemicals Division

Type of Document:
- [x] Notice of Violation and Inspection Report/Checklist
- [ ] No Violation Letter and Inspection Report/Checklist
- [ ] Letter of Acknowledgment
- [ ] Information Request
- [ ] Pre-Filing and Opportunity to Confer
- [ ] State Notification of Enforcement Action
- [ ] Return to Compliance
- [ ] Other Correspondence- NOD, memo to ORC

Facility Name: Midwest Generation – Crawford Station
Street Address: 3501 S. Pulaski Ave.
City: Chicago **State:** IL **Zip Code:** 60623

U.S. EPA ID#: ILD 044231470

Assigned Staff: D. Sharrow **Phone:** x6-6199

Name	Signature	Date
Author Sharrow		10-12-11
Regional Counsel Susan Tennenbaum		10-14-11
Section Chief Tereza		10-28-11
Branch Chief Setnicar/Little		11-1-11

MG RFC 10/28

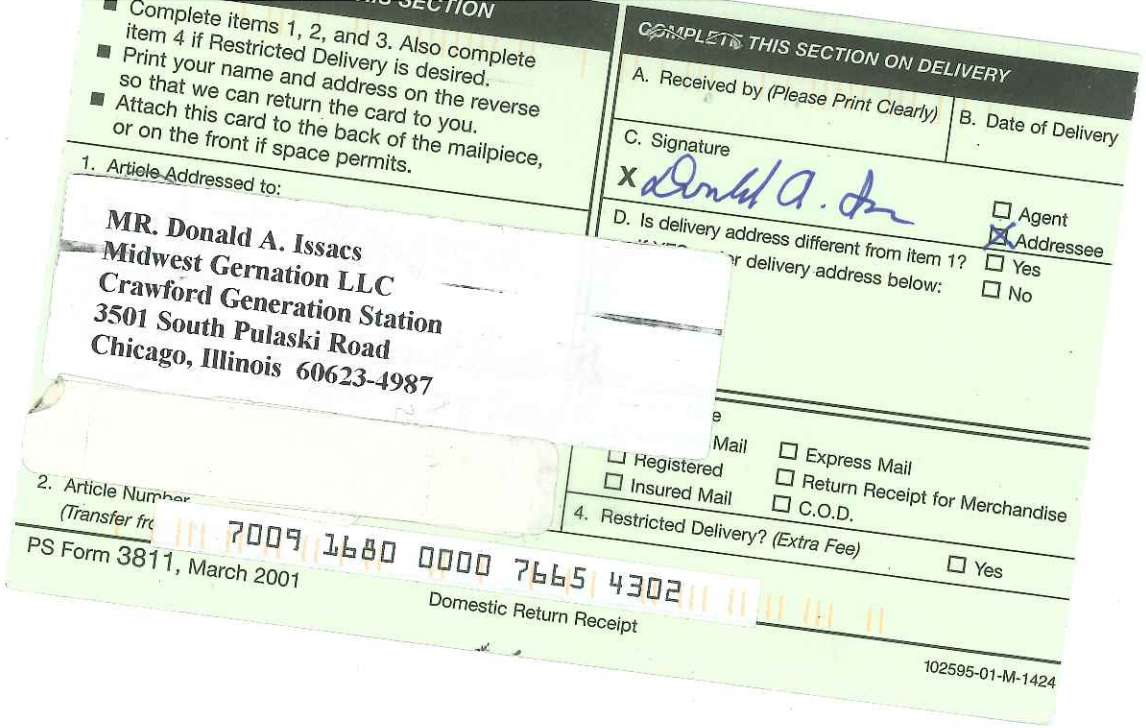
MG 11/1

Directions/Request for Clerical Support:
After the Section Chief/Branch Chief signs this sheet and original letter:

1. Date stamp the cover letter.
2. Make one copy of the contents of folder (including color photographs) for the official file.
3. Note that original inspection report, checklist & color photographs go to RCRA Fileroom.
4. Scan the letter, checklist and color photographs and save the file in the appropriate RB share drive folder.
5. Mail the original certified mail.
6. Distribute office copies (including report, checklist, and color photographs) to cc's and bcc's by email.

Once the certified mail receipt is returned:

7. File the certified mail receipt (green card), with this sign-off sheet and the official file copy, and take to 7th floor RCRA Fileroom.
8. E-mail staff the date that the letter was received by facility.



SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

MR. Donald A. Issacs
Midwest Gernation LLC
Crawford Generation Station
3501 South Pulaski Road
Chicago, Illinois 60623-4987

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* B. Date of Delivery

C. Signature

X Donald A. Issacs ☐ Agent ☒ Addressee

D. Is delivery address different from item 1? ☐ Yes
r delivery address below: ☐ No

e
Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Numbe
(Transfer fr 7009 1680 0000 7665 4302

PS Form 3811, March 2001 Domestic Return Receipt 102595-01-M-1424

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

MR. Donald A. Issacs
Midwest Gernation LLC
Crawford Generation Station
3501 South Pulaski Road
Chicago, Illinois 60623-4987

2. Article Number
(Transfer fr 7009 1680 0000 7665 4302

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* | B. Date of Delivery

C. Signature
X Donald A. Issacs ☐ Agent ☒ Addressee

D. Is delivery address different from item 1? ☐ Yes
r delivery address below: ☐ No

e
Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

PS Form 3811, March 2001 Domestic Return Receipt 102595-01-M-1424

Fw: Midwest Generation
Susan Tennenbaum to: Diane Sharrow 10/24/2011 10:55 AM

From: Susan Tennenbaum/R5/USEPA/US
To: Diane Sharrow/R5/USEPA/US@EPA

Susan M. Tennenbaum
Associate Regional Counsel
U.S. EPA, Region 5
77 West Jackson Boulevard (C-14J)
Chicago, Illinois 60604
T (312) 886-0273
F (312) 886-0747
----- Forwarded by Susan Tennenbaum/R5/USEPA/US on 10/24/2011 10:56 AM -----

From: Susan Tennenbaum/R5/USEPA/US
To: Diane Sharrow/R5/USEPA/US@EPA
Date: 10/14/2011 09:02 AM
Subject: Re: Midwest Generation

Hi Diane,

I found a few more corrections.

Thanks,

Susan MidwestGeneration.NOV.10October2011.docx

Susan M. Tennenbaum
Associate Regional Counsel
U.S. EPA, Region 5
77 West Jackson Boulevard (C-14J)
Chicago, Illinois 60604
T (312) 886-0273
F (312) 886-0747

Diane Sharrow Susan, I will place these in a sign-off package t... 10/13/2011 07:32:57 PM

From: Diane Sharrow/R5/USEPA/US
To: Susan Tennenbaum/R5/USEPA/US@EPA
Cc: Lorna Jereza/R5/USEPA/US@EPA
Date: 10/13/2011 07:32 PM
Subject: Midwest Generation

Susan,

I will place these in a sign-off package tomorrow and send them to you via interoffice mail along with the photographs and checklist. FYI - I will be on inspections next week, but will be checking messages both voice and e-mail as I can, but primarily towards the end of the work day.

Thanks,

Diane M. Sharrow
Environmental Scientist/Senior Inspector
USEPA, Region 5, Land and Chemicals Division
RCRA Branch, Compliance Section 1
Mail Code LR-8J
77 W. Jackson Blvd.
Chicago, IL 60604-3590

Direct 312.886.6199
Facsimile 312.692.2906

Sharrow.Diane@epa.gov

PROTECT THE ENVIRONMENT:

Save paper & trees. Print this message only if necessary.

Protecting the environment is everyone's responsibility. Help USEPA fight pollution by reporting possible harmful environmental activity. To file a report, visit: http:/www.epa.gov/compliance/complaints/index.html

Fw: Midwest Generation NOV
Susan Tennenbaum to: Diane Sharrow 10/24/2011 10:54 AM

From: Susan Tennenbaum/R5/USEPA/US
To: Diane Sharrow/R5/USEPA/US@EPA

Diane,

I'm forwarding this to remind you, that after I sent you some electronic revisions, I made some additional corrections by hand (not electronically) and sent the NOV back through interoffice mail. I'll resend the version I edited electronically.
----- Forwarded by Susan Tennenbaum/R5/USEPA/US on 10/24/2011 10:53 AM -----

From: Susan Tennenbaum/R5/USEPA/US
To: Diane Sharrow/R5/USEPA/US@EPA
Date: 10/13/2011 11:05 AM
Subject: Re: Midwest Generation NOV

Thanks, Diane. I hand corrected a couple of minor things on the hard copy, which I put in interoffice mail.

Susan

Diane Sharrow Susan, I will make the changes that you sugge... 10/13/2011 10:25:28 AM

From: Diane Sharrow/R5/USEPA/US
To: Susan Tennenbaum/R5/USEPA/US@EPA
Cc: Lorna Jereza/R5/USEPA/US@EPA
Date: 10/13/2011 10:25 AM
Subject: Midwest Generation NOV

Susan,

I will make the changes that you suggested this morning on Midwest Generation Info Request.

Attached is the Notice of Violation for Midwest Generation. I will finish the Report and send it to you electronically without pictures shortly.

I will put the sign-off package with NOV, Report and Pictures in interoffice mail to you tomorrow morning.

Thanks,

Diane M. Sharrow
Environmental Scientist/Senior Inspector
USEPA, Region 5, Land and Chemicals Division
RCRA Branch, Compliance Section 1
Mail Code LR-8J
77 W. Jackson Blvd.
Chicago, IL 60604-3590

Direct 312.886.6199

Facsimile 312.692.2906

Sharrow.Diane@epa.gov

PROTECT THE ENVIRONMENT:

Save paper & trees. Print this message only if necessary.

Protecting the environment is everyone's responsibility. Help USEPA fight pollution by reporting possible harmful environmental activity. To file a report, visit: http:/www.epa.gov/compliance/complaints/index.html

RCRA Facility Plan

OBJECTIVE:

The plan sets out an organized, planned, and coordinated course of action to be followed to minimize hazards to human health or the environment from fires, explosions, or unplanned sudden or non-sudden releases of hazardous waste or hazardous waste constituents. This plan applies to the following facilities:

Generator:	Crawford Generating Station
Generator ID:	ILD044231470
Generator Location:	3501 S. Pulaski Road Chicago, Illinois 60623
Generator:	Fisk Generating Station
Generator ID:	ILD044231538
Generator Location:	1111 W. Cermak Road Chicago, Illinois 60608

Note: *Crawford and Fisk are usually Small Quantity Generators; this plan is maintained for periods when it becomes necessary for the generator status to change to large quantity. This plan is not required for small quantity generators.*

Small Quantity Generators (SQG) may generate more than 220 pounds, but less than 2,200 pounds, of hazardous waste per month. The amount of acutely hazardous waste shall not exceed 2.2 pounds or 220 pounds of acutely hazardous spill residue. Requirements for SQG's include:

- *SQGs may accumulate hazardous waste on site for 180 days without a permit.*
- *The quantity of hazardous on site waste must never exceed 13228 pounds.*
- *There must always be at least one employee available to respond to an emergency. This employee is the emergency coordinator responsible for coordinating all emergency response measures.*

SCOPE:

Special wastes from Crawford and Fisk Stations are generated as a result of laboratory analysis, replacement of spent products, or routine operation and maintenance activities.

Under RCRA, wastes are defined as hazardous if they are listed as such or if they exhibit a hazardous characteristic of corrosivity, ignitability, reactivity or toxicity (TCLP testing). These facilities may, on an infrequent basis, generate hazardous waste. When a waste is generated, the Environmental Specialist is contacted to assist in determining the proper disposal method. For known non-hazardous wastes such as sludges and oil

contaminated soils, the Environmental Specialist will sample the waste and have the waste analyzed by laboratories, as required. For known or suspected hazardous waste, the waste disposal contractor may sample, analyze, package, and transport the material for disposal.

SAFETY:

This plan provides details for managing hazardous wastes at Crawford and Fisk Station. When possible consult MSDS sheets PPE and spill handling requirements for any material that may be addressed in this plan.

Safety Risk Level: Green

REQUIREMENTS:

1. Level of Use: **"For Training and Reference"**
2. Required Training: Operating personnel should receive annual training on this plan.
3. Document Review Cycle: Annual or if process changes require a more frequent review.

DISCUSSION:

This Plan has been written to satisfy the requirements of the Resource Conservation and Recovery Act (RCRA) for generators of hazardous waste pursuant to the requirements of 35 Ill. Adm. Code 722.134 and 725 Subparts C and D. It includes the following plans:

I. Use and Management of Containers (35 Ill. Adm. Code 725 Subpart I).

II. The Preparedness and Prevention Plan (35 Ill. Adm. Code 725 Subpart C).

III. The Contingency Plan and Emergency Procedures Plan (35 Ill. Adm. Code 725 Subpart D).

IV. The Personnel Training Plan (35 Ill. Adm. Code 725.116).

Questions with respect to this plan should be addressed to the following offices:

Station Director
Crawford Generating Station
3501 S. Pulaski Road
Chicago, Illinois 60623
Telephone: 773/247-7272

RCRA Facility Plan

RESPONSIBILITY:

The Environmental Specialist is the primary RCRA Coordinator for Crawford and Fisk Station. The Chemistry Specialist will serve as the backup RCRA Coordinator.

TECHNICAL INSTRUCTION DETAILS:

Look for SAFETY PRECAUTIONS at the beginning of each step.

Step Activity Outline

I. USE AND MANAGEMENT OF CONTAINERS

1. INTRODUCTION
   This section is presented pursuant to the requirements of 35 Ill. Adm. Code 722.134(a)(1) and 35 Ill. Adm. Code 725 Subpart I. The objective of the Plan is to set forth a program for the use and management of containers for the accumulation of hazardous waste.
2. CONDITION OF CONTAINER
   If the container holding hazardous waste is not in good condition, or if it begins to leak, our hazardous waste services vendor (SET or Heritage) will be contacted to transfer the hazardous or mixed waste from this container to a container that is in good condition. The condition of container(s) storing hazardous waste is/are inspected and documented on a weekly basis as required by 725.274 (refer to Section E. Inspections).
3. COMPATIBILITY OF WASTE WITH CONTAINER
   The containers used for the accumulation of waste are those which will not react with the waste and are otherwise compatible with the hazardous waste to be stored.

   Waste solvents (EPA Hazardous Waste Number D001) are stored in metal drums, polyethylene drums, or equivalent. Waste materials (EPA Hazardous Waste Number D002) are stored in plastic drums. Small quantities of chemicals which are lab-packed remain packaged in their original chemically compatible containers.

   Other spent products which would be considered hazardous wastes are stored in their original or other approved container.
4. MANAGEMENT OF CONTAINERS
   A container holding hazardous waste remains closed during storage, except when it is necessary to add or remove waste in accordance with Section 725.273 (refer to

Step **Activity Outline**

Section E. Inspections).

- Precautions taken during the opening, handling or storage of waste containers so as to prevent the container from rupturing or leaking are:
- Containers are handled in an upright position.
- Containers are stored away from direct heat sources (i.e., flame, sunlight). Consult Material Safety Data Sheets (MSDS) for direction.
- Access to waste is through prescribed openings (e.g., bunghole, lid).
- Containers which are not completely sealed when closed are considered to be in a poor or deteriorating condition and are replaced. However, wastes such as oils or solvents should be vented as necessary in an approved location, to prevent bulging or swelling.

5. INSPECTIONS

Areas where hazardous waste is stored are inspected and documented weekly on the Hazardous Waste Container Inspection Weekly Checklist to check for drum leaks and drum deterioration due to corrosion.

6. SPECIAL REQUIREMENTS FOR IGNITABLE WASTE

Containers holding ignitable waste are located at least 15 meters (50 feet) from the facility's property line (Section 725.276).

To prevent the accidental ignition of ignitable waste, the waste is separated and protected from sources of ignition including, but not limited to:

- Open Flames
- Smoking
- Cutting and Welding
- Hot Surfaces
- Frictional Heat
- Sparks (static, electrical, or mechanical)
- Spontaneous Ignition (heat-producing chemical reactions)
- Radiant Heat
- "No Smoking" signs are conspicuously placed in the areas around ignitable waste.

7. SPECIAL REQUIREMENTS FOR INCOMPATIBLE WASTES

The purpose of this section is to provide guidance to prevent fires, explosions,

Step **Activity Outline**

gaseous emissions, leaching or other discharge of hazardous waste or hazardous waste constituents which could result from the mixing of incompatible wastes or materials if containers break or leak.

Incompatible wastes or incompatible wastes and materials are not to be placed in the same container. Only organic solvent wastes are to be put into the waste solvent containers.

Wastes which are lab-packed are segregated by an approved waste disposal contractor who is knowledgeable in the applicable EPA and DOT regulations, as well as the applicable chemical requirements.

All wastes are placed in new, re-conditioned or triple rinsed containers or in drums which previously held the same product material (Section 725.277).

Storage containers holding hazardous wastes that are incompatible with any other waste or material stored in other containers, piles, open tanks or surface impoundments are to be separated from the other materials (Section 725.277). Appendix 1 gives examples of potentially incompatible wastes and provides a guide for the determination of which wastes and materials should be segregated. Additionally, applicable disposal site requirements which are more stringent than those detailed in Appendix 1 must be adhered to.

II. PREPAREDNESS AND PREVENTION

1. INTRODUCTION

This section is prepared pursuant to the requirements of 35 Ill. Adm. Code 722.134(a)(4) and 35 Ill. Adm. Code 725 Subpart C. The objective of this Plan is to minimize the possibility of a fire or explosion, or an unplanned release of hazardous waste which could present a threat to human health or the environment.

Listed below is the station equipment which may be required during implementation of this plan.

2. REQUIRED EQUIPMENT (725.132)

The following equipment is available on-site.

1) Communication System
2) Fire Prevention Equipment
3) Spill Control Equipment and Materials
4) Decontamination Equipment

RCRA Facility Plan

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5) Water Supply (at adequate volume and pressure to supply water hose streams or foam producing equipment, automatic sprinklers, or water spray systems)

A description of the above equipment may be found in Section III.E.2 of the Contingency Plan and Emergency Procedures as required by Section 725.152.

3. ACCESS TO COMMUNICATIONS OR ALARM SYSTEM

Personnel involved in handling hazardous wastes at Crawford and Fisk Stations have direct access to radios. In the event of an emergency, affected personnel would have immediate access to this communications device.

- The following information is posted near the hazardous waste storage:
- The name and telephone of the emergency coordinator
- Location of fire suppressant and spill control material.
- The emergency number for the fire alarm and evacuation

4. REQUIRED AISLE SPACE

Sufficient aisle space is maintained to allow the unobstructed movement of personnel, fire protection equipment, and spill control equipment to any area of waste accumulation (Section 725.135).

5. ARRANGEMENTS WITH LOCAL AUTHORITIES

Crawford and Fisk Station have made the following arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations:

1) Arrangements to familiarize the Fire Department, Emergency Response Teams with the layout of the facilities and properties of hazardous chemicals handled at the facility and associated hazard have been made. A copy of the SARA Title III Tier II Inventory Form was mailed to these agencies.

2) A contract with SET Environmental Services, Inc and Heritage Environmental to provide emergency response support for hazardous waste spills.

SET Environmental:

Telephone Number (Normal Business Hours): 847/537-9221

Emergency Number (After hours and weekends): 877/437-7455

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Heritage Environmental:

Telephone Number: (630) 739-1151

3) And arrangements have been made with:

St. Anthony Hospital
2875 West 19th Street
Chicago, IL 60623
(773) 484-1000,

or

Mount Sinai Hospital
California Avenue at 15th Street
Chicago, IL 60608
773-542-2000

to provide medical services as necessary. Additional services will be provided by resources available at the station.

Local ambulance services to be provide by calling 911 to reach the Chicago Fire Department

III. CONTINGENCY PLAN AND EMERGENCY PROCEDURES

1. INTRODUCTION

This section is prepared pursuant to the requirements of 35 Ill. Adm. Code 722.134(a)(4) and 35 Ill. Adm. Code 725 Subpart D. The objectives of this section are to minimize hazards to human health or the environment from fires, explosions, or unplanned releases of hazardous wastes or hazardous waste constituents to the environment.

2. APPLICABILITY OF OSHA REQUIREMENTS

Where a facility conducts both hazardous waste operations and also handles other hazardous substances defined in 29 CFR 1910.120, the requirements of 29 CFR 1910.120(g) also apply.

3. COPIES OF CONTINGENCY PLAN

A copy of the Contingency Plan must be maintained at Crawford and Fisk

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Generating Station at the following locations:

- EMG Procedure Database
- Environmental Specialist Office - Crawford
- Environmental Specialist Office – Fisk

4. AMENDMENT OF CONTINGENCY PLAN

The Contingency Plan must be reviewed annually and amended immediately if necessary, whenever:

1) Applicable regulations are revised.
2) The Plan fails in an emergency.
3) The facility changes in a way that materially increases the potential for fires, explosions or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency.
4) The RCRA Coordinator or the Alternate Coordinator changes.
5) The list or location of emergency equipment changes.

5. CONTINGENCY PLAN

1. Description of Required Actions

As mentioned in Section II, Preparedness and Prevention, the possible contingencies which would require the implementation of this plan are fires, explosions, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment. Applicable sections of the Crawford or Fisk Station Emergency Procedures will be brought into effect if required (see Appendix 2).

In the event of an emergency, the following steps will be taken:

a) The RCRA Primary Coordinator is notified of the emergency.

The following person is the primary RCRA Coordinator for Crawford and Fisk Station:

Don Isaacs
Work Phone No.: (773) 650-5489
Cell Phone No.: (773) 619-6282
Email: disaacs@ mwgen.com

The following person is the alternate for the position of RCRA Coordinator, and

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assumes responsibility as such:

Elizabeth Alvarez
Work Phone No.: (773) 650-5443
Cell Phone No.: (773) 410-1530
Email:ealvarez@mwgen.com

The address at which all of the above can be contacted during normal working hours is:

Midwest Generation, LLC
Crawford Station
3501 S. Pulaski Road
Chicago, IL 60623

b) The RCRA Coordinator will coordinate with the Station Director or Acting Station Director for the notification of off-site State and local agencies whose assistance may be required.

c) The station has approved procedures for aiding injured personnel. Local ambulance services will provide transportation for injured personnel to the appropriate hospital that has been selected by the Chicago Fire Department.

d) Whenever there is a release, fire or explosion involving hazardous waste, the RCRA Coordinator, in coordination with station technical personnel, will identify the character, exact source, amount and a real observation or review of facility records, MSDS'S, manifests and, if necessary, by chemical analysis. Concurrently, the RCRA Coordinator, in coordination with station technical personnel must assess the resultant possible hazards to human health or the environment that may result from the release, fire or explosion involving hazardous wastes. Both direct and indirect effect will be considered (e.g., the effect of hazardous runoffs to surface water from water or chemical agents used to control fire).

e) If the RCRA Coordinator determines that the facility has had a release, fire, or explosion which could threaten human health or the environment outside the facility, he must coordinate with the GSEP Director or Acting Director to:

1) Immediately notify and help the appropriate authorities if the assessment indicates that evacuation of local areas is advisable.

2) Immediately notify the National Response Center 24 hour number (800)

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424-8802 and the Illinois Emergency Management Agency (800)782-7860 with required information:

a. Name and telephone number of person reporting release

b. Date and time of report

c. On scene contact and telephone number

d. Location of release: address, county and any body of water if involved (medium or media into which the release occurred)

e. Date, time, type of incident

f. Materials involved, quantity, container, duration of release and estimated area affected

g. An indication of whether the substance is on the list of extremely hazardous substances.

h. Cause of the incident.

i. Extent of injuries, if any

j. Possible hazards to human health or the environment outside the facility

k. Containment measures, remedial actions being undertaken to correct incident

l. Name of report taker and Incident report number

m. Additional agencies who have been notified, report takers names, dates, times and additional related incident report numbers.

f) Immediately after an emergency, the RCRA Coordinator will provide for treati will be dependent on the above assessed magnitude and character of the release.

g) The RCRA Coordinator will ensure that, in the affected area(s) of the station:

1) No waste that might be incompatible with the released material is treated, stored or disposed of until cleanup is completed; and

2) All emergency equipment used in the Contingency Plan is decontaminated and fit for its intended use before operations in the

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affected areas are resumed.

3) Disposal of hazardous wastes is to be accompanied by a manifest with Land Disposal Restriction Notices if the waste is land disposal restricted.

h) The Environmental Specialist or designee must notify Illinois Emergency Management Agency and other appropriate Illinois State and local authorities in accordance with 725.156(i) that the station is in compliance with III E.1(g) of the RCRA Contingency Plan before operations are resumed in the affected area(s) of the station.

i) Following the emergency, its root cause is determined and action taken to prevent reoccurrence.

j) The above actions must be written in a report form and submitted to the Directors of the IEMA within 14 days of the incident. This report must include the information listed below (A report to the USEPA and a copy of the SPCC plan is required within 60 days if any oil is discharged to the waters of the nation or the amount is above 1000 gallons or it is the second reportable oil discharge greater than 42 gallons within a twelve month period. A copy of this report will be sent to the IEPA):

1) Name, address and telephone number of facility.

2) Name of on-site person (RCRA Coordinator/Alternate) who can be contacted and their phone number.

3) Date, time and type of Incident (explain).

4) Location of incident, county, and including name of body of water involved, if any.

5) Name and quantity of material (s) involved, container and estimated area affected.

6) Cause of spill, incident or violation --brief summary.

7) Extent of injuries; if any.

8) An assessment of actual or potential hazards to human health or the environment, where this is applicable.

9) Precautionary measures being taken and the action to be followed to remedy the situation.

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10) Estimated quantity and disposition of recovered material from the cleanup of the incident.

11) Agencies which have been notified, including report taker's name, date and time of notification. Name of the person notifying the Agencies.

12) Recommended follow-up actions.

13) Name of the person who writes the report and their phone number.

2. Equipment

All equipment listed below is tested and maintained to assure proper operation in the event of an emergency.

a) Communications

1) Radios

Two-way radios are available to station personnel responsible for hazardous waste generation, or storage areas and are used as required. These radios provide necessary communications with the station control room and Shift Supervisor's Office.

2) Telephones

The Crawford and Fisk Telephone Directory list all of the telephone extensions throughout the site. Extensions 2911 at Crawford and 7911 Fisk is a direct line to the station control rooms and has been reserved for emergency use only. All station personnel have been trained on the use of the emergency numbers. The Shift Supervisor can be reached at Extension 5402 at Crawford Station and 7502 at Fisk Station.

b) Fire Prevention

1) Emergency Response Team

Crawford and Fisk Stations have trained Fire Guides that receive training annually. They are trained to fight incipient stage fires, and provide logistic support to the Chicago Fire Department.

2) Fire Extinguishers

Fire extinguishers are CO2, dry chemical, or water type. CO2 type

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fire extinguishers are applicable for Class B and C fires, dry chemical type are applicable for Class B fires and water type are applicable for Class A fires.

c) Self-Contained Breathing Apparatus (SCBA)

This equipment provides thirty minutes of contained air supply to the wearer depending on supply source.

d) Spill Control Equipment

Crawford & Fisk Station maintain adsorbent material for clean-up and containment of oil spills.

e) Evacuation Plan

An evacuation plan for Crawford and Fisk Station is provided in the Station Generating Station Emergency Procedure (GSEP) This procedure will be activated by the GSEP Station Director when it is appropriate.

IV. THE PERSONNEL TRAINING PROGRAM

1. INTRODUCTION

This Program is intended to comply primarily with 35 Ill. Adm. Code 722.134, 35 Ill. Adm. Code 725.116 and can be maintained in parallel with OSHA requirements under 29 CFR 1910.120. The objective of the RCRA Personnel Training Program is to set forth a program of training which will enable personnel to respond to emergency situations and to perform hazardous waste management activities.

2. ORGANIZATION AND PERSONNEL

The individuals responsible for hazardous waste management at Crawford and Fisk Generating Station are listed below:

- Don Isaacs, RCRA Coordinator and HAZMAT Coordinator
- Elizabeth Alvarez, RCRA Back-up Coordinator

3. TRAINING

Training in the use of appropriate station procedures which involve management of hazardous waste is provided by Station personnel to the appropriate individuals.

1) All facility personnel successfully complete a program of classroom

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instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of 35 Ill. Adm. Code 725.116.

2) At a minimum, the training program is designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment and emergency systems.

3) Facility personnel successfully complete the program required in paragraph (2) of this section upon the effective date of these regulations or six months after the date of their employment or assignment to a facility or to a new position at a facility, whichever is later. Employees hired after the effective date of these regulations do not work in unsupervised positions until they have completed the training requirements of this section.

   Facility personnel must take part in an annual review of the initial training required in this section. This review is included in the web based annual cyclic training.

4) Training records on current personnel will be kept until closure of the facility. Training records on former employees will be kept for a least three years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.

5) Training on changing RCRA requirements is provided to the RCRA Coordinator. This training is provided on an as needed basis.

V. GUIDANCE DOCUMENT FOR THE SAMPLING OF POTENTIAL HAZARDOUS WASTES

1. GENERAL INFORMATION REGULATORY REQUIREMENT

Midwest Generation personnel should use the following guidelines when sampling wastes. The procedure described below is written to satisfy the waste stream analysis requirement listed in 35 IAC, Subpart B, Section 725.113(b)(3). The actual sampling methods comply with 35 IAC 721, Appendix A, or an equivalent method.

The purpose of the procedure is to precisely identify waste samples with the waste containers, document on-site waste information, and obtain representative samples in order to enable a laboratory to analytically identify and characterize each waste. That information will be used to determine if the waste is hazardous. Wastes which

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are subject to sampling under this procedure have been identified as having the potential for being hazardous. In most cases, the wastes will be containerized in drums, pails, bags, boxes, etc. The wastes may be found in a variety of physical forms, including:

- Solids - from impenetrable concrete to powder and resins
- Liquids - from viscous to nonviscous

Wastes could be mixtures of the above, and/or could then contain foreign items, such as paper trash, mixed with a powdered waste. Regardless of the physical state of the waste, it must be representatively sampled.

Documentation must accompany each waste sample in a manner that identifies the sam in the ultimate identification of the waste and/or its origin, especially in the case of unknown wastes. Documentation should include such identifying information such as, the wastes' physical state, odor, and viscosity. Other information which requires on-site documentation includes the type of storage container, location of waste within facility, and quantity. Documentation also includes sample labeling, chain of custody forms.

In cases where wastes will be handled through a waste disposal contractor, they will supply the required documentation. In all other cases, the facility is responsible for the necessary sampling and documentation. In all cases, the Environmental Specialist will coordinate all waste broker activities with the station and offer assistance in any other waste disposal.

The following two sections outline the tasks that a waste sampling team must perform.

2. DOCUMENTATION

1) Labeling of Samples and Source

Each waste container sampled and the sample jar used containing a representative of that waste must have identical stick-on labels. These labels must have the following information on it.

Collector _____

Sample No. _____

Place of Collection _____

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Midwest Gen Facility _____

Date Sampled _____

Time Sampled _____

Comment _____

2) Container Marking

Each container sampled must (in addition to the stock-on label) have its sample number marked on it with a non-erasable marker, i.e. grease marker for an oily drum, or indelible ink pen on plastic or fiber bag containers.

3) Sample Numbering

Samples obtained must be numbered sequentially starting with one. Each sample number must be prefixed with the stations name identification, i.e. Crawford; Hence Crawford's samples will be Crawford1, Crawford2 etc.

Sample numbers are applied to the sample labels, container labels, container markings, sample profile sheets and chain of custody forms.

4) Waste Information Sheet

All the date on the waste information sheet must be completed for each waste sampled. This information must be made available to commercial laboratories and regulatory personnel upon request. The information recorded on each sheet must be completed at the time the waste is actually sampled.

5) Chain of Custody Forms

A chain of custody form must accompany each sample, or group of samples when control of those samples passes from one individual or institution to another.

3. WASTE SAMPLING

The following tasks must be completed for all samples taken:

- Sample volumes must be at least 1 liter in glass or plastic wide mouth jars.
- Samples must be labeled and numbered.
- Sample jars must be sealed at the time of sampling with tape.
- Each waste container will be represented by a sample

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- Disposable sampling equipment must remain with the waste or be cleaned using approved methods.

The most important aspect of waste sampling is to obtain the most representative sample possible. Liquid wastes in a drum can be layered with the heavy fraction settling to the bottom. Solid could be segregated in a drum due to haphazard dumping. In any case the drum or other container to be sampled represents one waste stream and its sample must be representative of all the varying waste constituents within the container. The following is offered as guidance to achieve representative samples.

1) Liquid in a drum

When the only access to the liquid waste in the drum is through a bung hole, then three directional and one vertical sample is taken through the bung opening using the glass sampling tube. Each of the four insertions must extend to the bottom of the container.

2) Solids in drums - powder or friable

Powdered and/or friable solids can be sampled representatively using a coring tool. Three separate samples from one individual drum should be obtained if possible; one from the lower third, the middle third, and the top third of each drum. Each third of sample is combined into one sample jar to represent the waste in the drum.

3) Solids in other containers

Solids in bags must be sampled by obtaining several grab samples representing different areas of the bag.

4) Soil Samples on Company Property

Soil samples are to be obtained by taking several grab samples on a cross sectional grid. Samples will be composited to represent the area in question.

5) Foreign objects in the waste

If such items as trash paper, cardboard, wood, metal objects, aluminum cans, or other materials that typically are considered as trash and foreign to the waste being sampled are found in a drum, then those items must be dealt with in one of two ways.

- If there are only a few such foreign items, and they can be easily extracted from the waste, then they should be extracted and handled as refuse waste

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and not subjected to TCLP sampling.

- If the foreign items cannot be extracted from the waste to be sampled, then the presence of those foreign items must be noted on the waste profile form as part of the waste stream name and noted in the comment section. For example:

  Waste Name: Demineralizer resin and paper debris

  Comment: Waste contains embedded paper waste.

6) Sampling Techniques

Care must be taken to prevent cross contamination from one sample to another. These precautions should be followed to prevent such misrepresentation of wastes.

- All personnel sampling waste must wear disposable gloves. The gloves must be changed after each sample is obtained
- Glass tubes must be used only once per waste sampled.
- Coring tubes used to sample solids must be de-contaminated before reuse. Decontamination can be as simple as wiping off waste residue with a rag or rinsing with water.

4. EQUIPMENT

Proper hazardous waste sampling requires that the sampling team be supplied with the right sampling equipment. Below is listed some of the equipment necessary to complete a sampling program.

- Glass sample tubes - Hollow, 4 feet long, 1/4 inch in diameter. Glass tubes are disposable, i.e. only used once per waste stream. After the sample has been obtained, reinsert the glass tube and break it off into the drum before reclosing.
- Sample jars - Wide mouth, glass or plastic, one each for each waste container to sample. The laboratory will determine the type of sample container and sample volume required based on the analyses to be performed.
- Coring Equipment - A four foot long coring device to obtain sample from sections of a drum.
- Gloves - Disposal gloves.

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- Tools - Hand tools to open drum lids, bung holes, plastic pail covers, etc. Such items as wrenches, screwdrivers, mallets, knives if necessary.
- Markers - Indelible ink markers and yellow grease pencils will be required.

Environmental Specialist, with the assistance of station personnel, will evaluate and determine the test analyses required based on information provided by the station on a waste stream specific profile sheet. The sampling and test methods employed will be in accordance within guidelines in "Test Methods for Evaluating Solid Wastes", USEPA, SW-846, Third Edition, November, 1986.

REFERENCE DOCUMENTS:

Related Procedures –

- EMG-5200 Hazardous Waste Management
- FSK-P3140 Fisk GSEP
- CRA-P3277 Crawford DOT Emergency Plan

Related Technical Instructions –

- CRW-T32000 Crawford SPCC Plan
- FSK-T32000 Fisk SPCC Plan

Miscellaneous Documents –

- RCRA Plan Training Material

DEFINITIONS: NA

USER COMMENTS:
Document safety concerns or other suggested improvements to this Technical Instruction here. Forward all recommendations to your Supervisor and/or Database Coordinator.

Midwest Generation - Crawford RCRA Training Documents
Donald Isaacs
to:
Diane Sharrow
08/22/2011 03:29 PM
Hide Details
From: Donald Isaacs <disaacs@edisonmission.com>

To: Diane Sharrow/R5/USEPA/US@EPA

History: This message has been replied to.

2 Attachments

2011.02.10.RCRA Training Certificate.Heritage.pdf 2010.10.05.RCRA Training Certificate.SET.pdf

Regarding your August 8th Inspection, here's the training documents I had spoken about.

Don Isaacs
Environmental Specialist
Midwest Generation Crawford & Fisk Stations
773-650-5489

HERITAGE[SM]
ENVIRONMENTAL SERVICES

Certificate of Achievement

In recognition of successful completion of
Hazardous Waste Regulatory Review Course

Don Isaacs

has been awarded this certificate by

Heritage Environmental Services, LLC

On February 10, 2011

Angela Martin
Blue Sky Engineering, Inc.

CERTIFICATE OF TRAINING

SET Environmental, Inc. hereby certifies that

Dan Isaacs

has been provided 16 hours of training in: Resource Conservation and Recovery Act generator requirements in accordance with 40 CFR 262.34(a)(4) and 265.16; general awareness, function-specific, and security awareness training in accordance with 49 CFR 172.704(a) and while attending SET Environmental's course on Hazardous Waste and Materials Management has successfully passed an examination in accordance with 49 CFR 172.702(d) on October 5, 2010.

Daniel A. Didier, Instructor, CHMM
SET Environmental, Inc.
5738 Cheswood Street
Houston, Texas 77087

Today's Inspection- Midwest Generation Crawford
Donald Isaacs
to:
Diane Sharrow
08/08/2011 08:29 PM
Hide Details
From: Donald Isaacs <disaacs@edisonmission.com>

To: Diane Sharrow/R5/USEPA/US@EPA

History: This message has been replied to.

5 Attachments

DSC02823.JPG DSC02827.JPG DSC02829.JPG IMG00856.jpg IMG00857.jpg

Dear Ms. Sharrow,
It was a pleasure meeting with you today on your inspection of the Crawford Generating Station. I am following up with photographs of the areas regarding used oil we had spoken about. The following photo numbers are accompanied by my descriptions of the attachments. Any questions please contact me.

Photo 2827
Drums pointed out earlier today are the 2 in foreground center and 1 to the right. These are labelled are as follows:
Foreground center- Was a labelled transformer fluid drum. This is now labelled "used oil" as this drum was recently brought in to used oil room for recycling.
Right side- Drum was a labelled hydraulic fluid drum. This is now labelled "used oil" as this drum was recently brought in to used oil room for recycling.
Background- is new drum of used antifreeze, with label.

Photos 2829 and 856
Drum containments for used oil (had been used for draining drums of residual used oil). Now are labelled "used oil" as discussed.

Photo 857

New used oil drum recently brought in to used oil room for recycling. Now has label "used oil". In upper left, see new label of empty used oil tank (over old Waste Oil label)

Photo 2823
Empty drum stack; drum at left center has been wiped clean of liquid oil residual previously on top, as discussed.

Donald A. Isaacs
Environmental Specialist
Midwest Generation Crawford and Fisk Stations
773-650-5489


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